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EXAMINING VA IMPLEMENTATION OF THE PERSIAN GULF WAR VETERANS ACT OF 1998

HEARING

BEFORE THE

SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS, AND INTERNATIONAL RELATIONS

OF THE

COMMITTEE ON GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

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EXAMINING VA IMPLEMENTATION OF THE PERSIAN GULF WAR VETERANS ACT OF 1998

TUESDAY, NOVEMBER 15, 2005

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING
THREATS, AND INTERNATIONAL RELATIONS,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 1:03 p.m., in room 2154, Rayburn House Office Building, Hon. Christopher Shays (chairman of the subcommittee) presiding.

Present: Representatives Shays, Dent, and Kucinich.

Staff present: Lawrence Halloran, staff director and counsel; J. Vincent Chase, chief investigator; Kristine Fiorentino, professional staff member; Robert A. Briggs, clerk; Andrew Su, minority professional staff member; and Jean Gosa, minority assistant clerk.

Mr. SHAYS. A quorum being present, the Subcommittee on National Security, Emerging Threats, and International Relations hearing entitled, "Examining VA Implementation of the Persian Gulf War Veterans Act of 1998" is called to order.

Work by this subcommittee provided critical impetus for passage of the Persian Gulf War Veterans Act of 1998. That law directs the Department of Veterans Affairs [VA], to seek independent assessments of possible associations between toxic exposures and the unusual syndromes afflicting many ill veterans.

If a scientifically valid association is found, the VA may, by regulation, establish a presumption of service connection in favor of those applying for health and disability benefits. That process was intended to allow the VA to give sick veterans the benefit of the doubt until hard evidence of causality between the wartime exposures and chronic illnesses emerges from ongoing research. In the meantime, the law directs the VA to look to studies on animals to fill gaps in clinical and epidemiological data.

Last year, a VA-sponsored review by the Institute of Medicine [IOM], on the effects of low-dose Sarin exposure raised questions whether the statutory mandate to use animal data is being followed. Former VA Secretary Anthony Principi specifically requested a reappraisal of earlier conclusions on Sarin exposure, based on the emergence of significant new studies showing the chronic brain function changes in animals after low-dose exposures. But the IOM committee reported animal studies play only a small role in their assessment.

Not surprisingly, the expert committee, as before, found no connection between sub-clinical Sarin exposures and human illnesses.

That conclusion epitomizes what many veterans see as a deeply entrenched reluctance in the VA and allied medical institutions to extrapolate from animal data on fundamental questions of disease causation.

As the VA sees it, toxicology studies on rats and other animal data may be useful to probe the biologic plausibility of medical hypotheses; but only data from studies involving humans can be relied upon to determine a legitimate association between exposure and human disease.

That sustained unwillingness to rely on animal studies thwarts a fundamental purpose of the statute: to ease the traditional burden of proof borne by veterans claiming service-connected injury and disability. Whether motivated by a lack of scientific vision, or a fear of fiscal implications, the refusal to give greater sway to animal data in Persian Gulf War Veterans Act determinations undercuts the basic intent of the law to expand the scope of evidence upon which the VA may connect today's mysterious illnesses to wartime service a decade and a half ago.

Those that the VA charge with implementation of the statute have to know the gold standard of human data on Sarin exposure they demand may never be available. Gulf war veterans don't know the dose to which they were exposed, and their fate should not hinge on the unthinkable prospect we will have more veterans who are terrorism victims to study.

In terms of research protocols, it is unethical to intentionally expose human test subjects to lethal agents. So only data from animal studies will allow the VA to construct the links between exposure and ailments that sick veterans cannot. But, as we will hear from close observers of the process today, it appears VA has repeatedly attempted to minimize the role and impact of animal data in Gulf war studies.

Ironically, another major scientific organization is moving in exactly the opposite direction. The Food and Drug Administration's Animal Efficacy Rule allows for approval of certain new drugs and biological products based solely on data from animal studies. So the experimental drugs and vaccines soldiers might be ordered to take against bioterrorism agents can be approved through unprecedented reliance on animal data; but determinations regarding the toxic causes of their subsequent illnesses still cannot.

Our witnesses, all our witnesses, bring extraordinary commitment to the cause of helping veterans. And we appreciate their time and expertise, as the subcommittee continues to pursue these difficult issues.

The Chair at this time would recognize the distinguished gentleman, the ranking member, Mr. Kucinich.

[The prepared statement of Hon. Christopher Shays follows:]

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Statement of Rep. Christopher Shays
November 15, 2005

Work by this Subcommittee provided critical impetus for passage of the Persian Gulf War Veterans Act of 1998. That law directs the Department of Veterans Affairs (VA) to seek independent assessments of possible associations between toxic exposures and the unusual syndromes afflicting many ill veterans. If a scientifically valid association is found, the VA may by regulation establish a presumption of service-connection in favor of those applying for health and disability benefits.

That process was intended to allow the VA to give sick veterans the benefit of the doubt until hard evidence of causality between wartime exposures and chronic illnesses emerges from ongoing research. In the meantime, the law directs the VA to look to studies on animals to fill gaps in clinical and epidemiological data.

Last year, a VA-sponsored review by the Institute of Medicine (IOM) on the effects of low-dose sarin exposure raised questions whether the statutory mandate to use animal data is being followed. Former VA Secretary Anthony Principi specifically requested a reappraisal of earlier conclusions on sarin exposure based on the emergence of significant new studies showing chronic brain function changes in animals after low-dose exposures. But the IOM committee reported animal studies played only a small role in their assessment. Not surprisingly, the expert committee, as before, found no connection between sub-clinical sarin exposures and human illnesses.

That conclusion epitomized what many veterans see as a deeply entrenched reluctance in the VA and allied medical institutions to extrapolate from animal data on fundamental questions of disease causation. As the VA sees it, toxicology studies on rats and other animal data may be useful to probe the biological plausibility of a medical hypothesis; but only data from studies involving humans can be relied upon to determine a legitimate association between exposure and human disease.

That sustained unwillingness to rely on animal studies thwarts a fundamental purpose of the statute: to ease the traditional burden of proof borne by veterans claiming service-connected injury and disability. Whether motivated by a lack of scientific vision or a fear of fiscal implications, the refusal to give greater sway to animal data in Persian Gulf War Veterans Act determinations undercuts the basic intent of the law to expand the scope of evidence upon which VA may connect today's mysterious illnesses to wartime service a decade and a half ago.

Those at the VA charged with implementing the statute have to know the gold standard of human data on sarin exposure they demand may never be available. Gulf War veterans don't know the dose to which they were exposed, and their fate should not hinge on the unthinkable prospect we'll have more veterans or terrorism victims to study. In terms of research protocols, it is unethical to intentionally expose human test subjects to lethal agents. So only data from animal studies will allow VA to construct the links between exposure and ailments that sick veterans cannot. But, as we will hear from close observers of the process today, it appears VA has repeatedly attempted to minimize the role and impact of animal data in Gulf War studies.

Ironically, another major scientific organization is moving in exactly the opposite direction. The Food and Drug Administration's Animal Efficacy Rule allows for approval of certain new drugs and biological products based solely on data from animal studies. So the experimental drugs and vaccines soldiers might be ordered to take against bioterrorism agents can be approved through unprecedented reliance on animal data, but determinations regarding the toxic causes of their subsequent illnesses still cannot.

Our witnesses all bring extraordinary commitment to the cause of helping veterans, and we appreciate their time and expertise as the Subcommittee continues to pursue these difficult issues.

Mr. KUCINICH. Mr. Chairman, I want to thank you for holding this hearing. And I also want to thank you for your leadership on this issue.

It has been 14 years since the end of the Persian Gulf war, and Congress is still holding hearings on the serious and persistent health problems suffered by one-third of the veterans who served in that conflict. Many of these problems have existed throughout the 14-year period; while others are just starting to appear.

In fact, studies have shown that ALS, or Lou Gehrig's Disease, is twice as prevalent in veterans of that war, when compared to their non-deployed peers. While we now know that stress is not the cause, there is still much we do not know.

I am happy to say that Mr. Shays, Mr. Sanders, and I were successful this year in our efforts to provide for funding for research into these Gulf war veterans' illnesses. The intent of our effort was not only to discover enough to prevent the offending exposures in the future, but also to make sure that those already exposed get the medical treatment they deserve.

The more we know about the links between these illnesses and their exposures, the more likely the VA will give our soldiers an adequate disability rating for their exposure. But the VA continues to ignore a critical body of information that is going to be wasted as a result of their unwillingness to probe further.

And I know it is harder to pinpoint causes and effects in human studies, because you cannot intentionally expose people to toxins; except of course in combat. And human epidemiological studies, that are a snapshot in time, are sometimes a problem, because you don't know if the exposure came before the disease.

This is one of the reasons why we need to review data from all of the studies that have been done, to assess the toxicity of everyday products we buy and of the pharmaceuticals we take.

I think that this hearing, therefore, is important, Mr. Chairman. I think you would agree that we owe our Nation's veterans a debt of gratitude for their service. We can do better, and we have to do better. Thank you, Mr. Chairman.

[The prepared statement of Hon. Dennis J. Kucinich follows:]

Statement of Rep. Dennis J. Kucinich
Ranking Minority Member
Subcommittee on National Security, Emerging
Threats and International Relations
House Committee on Government Reform

Hearing on "Implementation of the Persian Gulf War
Veterans Act of 1998"

November 15, 2005

Thank you, Mr. Chairman, for holding this hearing and for your leadership on this issue. It's been 14 years since the end of the Persian Gulf War, and Congress is still holding hearings on the serious and persistent health problems suffered by one-third of the veterans who served in that conflict.

Many of these problems have existed throughout the 14-year period, while others are just starting to appear. In fact, studies have shown that ALS or Lou Gehrig's Disease is twice as prevalent in veterans of that war when compared to their non-deployed peers. While we now know that stress is not the cause, there is still much we do not know.

I am happy to say that Mr. Shays, Mr. Sanders and I were successful this year in our efforts to provide for funding for research into these Gulf War Veterans Illnesses. The intent of our effort was not only to discover enough to prevent the offending exposures in the future, but also to make sure that those already exposed get the medical treatment they deserve. The more we know about the links between these illnesses and their exposures, the more likely the VA will give our soldiers an adequate disability rating for their exposure.

But if the VA continues to ignore animal data, a critical body of information will be wasted and lower disability ratings will result. I'm no scientist but I can certainly see the limitations of relying mostly on human research. I know it is harder to pinpoint cause and effect in human studies because you cannot intentionally expose people to toxins (except, of course, in combat).

And human epidemiological studies that are a snapshot in time are sometimes a problem because you don't know if the

exposure came before the disease. These are only a handful of the reasons we need animal studies.

Animal data are routinely used to guide policy in many other situations. They are used to assess the toxicity of the everyday products we buy and of the pharmaceuticals we take. If the data are sufficiently scientific to justify the release of a chemical that will be exposed to billions of people, then animal data are certainly good enough to be used to help link exposure to disease among those who represented us in war.

We owe our nation's veterans a debt of gratitude for their service. We can do better than this. We must do better than this. Thank you, Mr. Chairman. I yield back.

Statement of Rep. Dennis J. Kucinich
Ranking Minority Member
Subcommittee on National Security, Emerging
Threats and International Relations
House Committee on Government Reform

Hearing on "Implementation of the Persian Gulf War Veterans Act of 1998"

November 15, 2005

Thank you, Mr. Chairman, for holding this hearing and for your leadership on this issue. It's been 14 years since the end of the Persian Gulf War, and Congress is still holding hearings on the serious and persistent health problems suffered by one-third of the veterans who served in that conflict. Many of these problems have existed throughout the 14-year period, while others are just starting to appear. In fact, studies have shown that ALS or Lou Gehrig's Disease is twice as prevalent in veterans of that war when compared to their non-deployed peers. While we now know that stress is not the cause, there is still much we do not know.

Yet, just when we have started making progress, just when we've started to eliminate factors from lists of potential causes, just when research prospects have never been brighter, this Administration wants to cut all funding for Gulf War Illness research. Neither the Department of Defense nor the Department of Health and Human Services included a single penny for continued research in their FY 2006 budget request. In the meantime, we are spending $165 million each day to support current military operations in Iraq.

In fact, I'm not even sure who's in charge of veterans' health care, because this Administration can't even get its facts in order. This past summer, Congress was first told that the Administration could ride out the rest of the year at current funding levels. Two weeks later, the Administration reversed course and asked for $975 million in supplemental funds. Then it asked for another $300 million for veterans' health care needs through September. In total, the Veterans Administration acknowledges now that it needs an additional $3 billion to adequately fund the VA health care system for FY 2006, and a tremendous gap in funding remains to be resolved by House and Senate appropriations conferees.

This is as indefensible as much as it is incomprehensible, and I want straight answers from the witnesses today as to why this is the case.

I am happy to say that Mr. Shays, Mr. Sanders and I were successful this year in our efforts to provide for funding for research into these Gulf War Veterans Illnesses. The intent of our effort was not only to discover enough to prevent the offending exposures in the future, but also to make sure that those already exposed get the medical treatment they deserve.

We owe our nation's veterans a debt of gratitude for their service. We can do better than this. We must do better than this. Thank you, Mr. Chairman. I yield back.

Mr. SHAYS. I thank the gentleman. Let me use this opportunity ask unanimous consent that all Members of the subcommittee be permitted to place an opening statement in the record and that the record will remain open for 3 days for that purpose. And without objection, so ordered.

I ask further unanimous consent that all witnesses be permitted to include their written statement in the record. And without objection, so ordered.

Let me announce our witnesses. We have two panels. Our first panel is Mr. Mike Woods, Gulf war veteran; Mr. Steve Robinson, executive director, National Gulf War Resource Center; Mr. Jim Binns, chairman, Research Advisory Committee on Gulf War Veterans Illnesses; Dr. Rogene Henderson, senior scientist, Lovelace Respiratory Research Institute; Dr. James P. O'Callaghan, member of the Research Advisory Committee on Gulf War Veterans Illnesses. I would welcome them all to come, and I will swear them in.

[Witnesses sworn.]

Mr. SHAYS. Note for the record, all our witnesses have responded in the affirmative. Please be seated. Thank you.

Before inviting Mr. Woods to speak first, I ask unanimous consent to place in the record 33 statements and letters submitted regarding the Persian Gulf War Veterans Act of 1998. And without objection, so ordered. The list includes the 33 names, and we will submit it.

[The information referred to follows:]

I would also like to ask unanimous consent to place in the record 33 letters submitted regarding The Persian Gulf War Veterans Act of 1998…
Without objection, so ordered

1). Steven S. Feldman
2). Charles D. Haner
3). Cherie L. Poore
4). Carl James Musgrove
5). Denise Nichols
6). Edward J. Bryan
7). Denise A. Leslie
8). Richard J. Valente
9). GW Pulliam
10). N. Gale Reid
11). John W. James and Louise F. James
12). Kenneth Welch
13). William A. Schober
14). Edward Butler, Jr.
15). Margaret Diann Hursh
16). Elizabeth Burris
17). Steve Ferguson
18). Matt Thompson
19). Don Thompson
20). Julia Y. Dyckman
21). Jay M. Hill
22). Sean David Reddeclife and Marilee Lahn
23). Michael Bogden
24). Michael G. Bailey
25). Tom Reilly
26). Anita and Rim Bajoraitis
27). Carl Musgrove
28). Sandra K. Ates
29). Doug Rokke
30). Keith G. Reimers
31). Steve Vargha
32). Dr. Doug Rokke
33). Georgia A. Saxon

Testimony of Steven S. Feldman
Before committee examining VA Implementation of the Persian Gulf War Veterans Act of 1998
November 15th, 2005

Thank you all for providing me the opportunity to offer my testimony in regards to the VA's implementation of the Persian Gulf War Veterans Act of 1998.

I am a veteran of the 1990/1991 gulf war who was recently diagnosed with Multiple Sclerosis.

Although I was not diagnosed with MS within the allotted 7 year window, I was fortunate enough to have sufficient supportive documentation to be granted "service connection" for my condition.

Like thousands of others, I have been suffering my entire adult life as a result of my service in the Persian gulf.

As a young Specialist in the Army, I celebrated my 21st birthday in the gulf. It became the last birthday I would see without suffering.

My problems began in January of 1991 with intermittent bouts of disorientation which would later render me completely incapacitated for extended periods. Since I rarely received more than four hours of sleep per night, I was easily able to conceal my deficit by claiming it was simply fatigue.

When I returned to my family in Germany in May of 1991, it was a bit more difficult hiding my problems. My wife noticed my episodes almost immediately upon my return. She would frequently suggest that I see a doctor about it. I would constantly make excuses for my actions and would become angry when she would insist on making an issue of my condition. She finally relented and would simply help to re-orient me when I'd experience my episodes of confusion.

I PCS'd to Ft. Benning GA when our unit "HHC 1-35 Armor" deactivated in October of 1991. My problems followed me there and continued to mildly worsen. I realized that even though I had a wife and children to support, and that civilian life was loaded with uncertainties, that I could not continue as a soldier in the U.S. Army. I ETS'd in October of 1992 and returned to Michigan.

I had been a mechanic in the Army for four years and it was the only work I knew. I ended up taking a job in a sweat shop doing suspension

work on heavy trucks for 60 hours per week, just to make ends meet. I worked there for a year when my problems so much got the better of me that I was about to quit my job. When I was at my wits end, the U.S. Postal Service called me. I had submitted an application upon discharge from the Army and they wanted to hire me as a mechanic. I would be working on light machinery and automation equipment. My condition would no longer put peoples lives in jeopardy so I could continue to work and support my family.

My condition actually improved shortly after hiring in to the Post Office for a time.

In July of 1994 I suffered some extended periods of disorientation, severe headaches and was now having severe pains in my joints, particularly my knees. Since I had health insurance at this point, I finally went to see a doctor about my problems.

My doctor ran the standard blood work and sent me for a neuropsychological evaluation.

By the time of the evaluation, my head had significantly cleared. When I discussed the results with my doctor, he told me that I didn't have a significant deficit. We spoke further and when I mentioned that my problems began in the gulf, he immediately suggested that my problems were not organic at all, and that if I were to seek additional treatment he would prescribe psychological care.

Since I didn't believe that I was psychologically impaired, nor did I think I would benefit from such treatment I decided that I would continue to work around my problems and put the whole gulf war experience behind me.

In December of 2000, I suffered loss of use across the entire right side of my body. This condition would occur episodically, usually lasting only a few minutes. My doctors performed CT scans, MRI's, Lumbar Punctures, EEG's, Evoke Potential tests, etc. I had 5 neurologists working on me. They all saw different problems, yet none could agree on results. Nobody was treating me but after a month, that condition went away. I stopped seeing the neurologists because they'd run every test and didn't diagnose or treat me. I just got better.

Still suffering from the ongoing cognitive deficit, I continued with my life.

One day in May of 2004, a friend of mine at work who was a Viet Nam veteran took me aside and told me I should see the VA about my

problems. I explained to him that I didn't want anything from the VA and that I would continue to "drive on" on my own. He then reminded me that I wasn't getting any better, and that the time would come that I wouldn't be able to care for myself or my family. His words began to hit closer to home.

In June of 2004 I went to see the Macomb County Veterans Service counselor.

My counselor helped me complete and submit the forms to request compensation from the VA.

I was evaluated by the VA and while I was waiting for word back on their decision, I suffered an unrecoverable cognitive episode. I couldn't think, couldn't focus and all my thoughts were random. It took every ounce of strength I had just to remain conscious.

My wife took me back to the doctors, they MRI'd my head again and compared those scans with the MRI's from 2000. The neurologist who reviewed my results said that I had more lesions on my brain and that they were "consistent with my history of Multiple Sclerosis". Until then, I was completely unaware that I had a history of MS.

I started seeing neurologists again. My primary neurologist, Dr. Brian Silver offered to try a drug that had been showing promise for cognitive issues in MS patients. I was so pathetically dysfunctional, I would have allowed him to drill holes in my head if the air would help me to think.

3 weeks after I started taking "Aricept", and Alzheimer's medication, the clouds in my head began to clear and I could function well enough to return to work and continue my life.

Meanwhile, we received the VA's decision which was based on their evaluation. It looked like this:

Service connection for bilateral hearing loss is denied.
Service connection for vision loss is denied.
Service connection for headaches is denied.
Service connection for joint pain and swelling is denied.
Service connection for right arm numbness and pain is denied.
Service connection for muscle weakness is denied.
Service connection for seizures is denied.
Service connection for chronic fatigue is denied.
Service connection for memory loss is denied.

The VA was kind enough to awarded me 10% disability for my tinnitus.

I was somewhat aghast that given my overall condition, I would be awarded a disability for "ringing in my ears".

I submitted an appeal with my most current medical documentation which included my diagnosis of MS, along with testimony from my neurologist and a former Commanding Officer who witnessed my initial episodes which took place in the gulf. Upon review, I was awarded "Service Connection" for my Multiple Sclerosis.

Since my diagnosis of "Multiple Sclerosis", I have encountered hundreds of other gulf war veterans who are also afflicted with this disease. With as few members of my gulf deployed unit I've had contact with, I know one other who has a confirmed case of MS.

I realize that my diagnosis took years longer than was necessary in part because I purposefully denied my condition. I didn't want to admit to others that I was weak. I felt that as long as I could "play healthy" and make people believe that I was healthy, that I might get through this and one day become healthy. I was sadly mistaken.

In the year since I was diagnosed my condition has taken a serious turn for the worse, at least physically. My legs hurt so bad from the mid thighs down that when I'm finished at work, I come home and lay on the sofa with heating pads on my legs. My family is suffering because work is about all the physical strain I can take. I'm terribly depressed because of that, and because despite my best efforts to regain my strength and stamina, I'm weaker and in more pain with each passing month.

My doctors are working with me through medications and exercise to try making me more whole. I wish I could be more optimistic about my treatment but it seems that every time I try something new, it may alleviate one issue while it creates two or three others. I just stopped taking the Elavil and Baclofen because the two combined, although were taking the edge off of the pain, were making me more tired, and I believe starting to detract from the positive cognitive affect I've gained from the Aricept. I'm still taking Rebif injections three times per week because my current MRI's aren't showing increased scarring.

Tomorrow, November 15th, the day of this hearing for which I'm providing this testimony I have another appointment and hopefully my doctors and I can get a better grip on my medications.

To the point I was alluding to a moment ago, I believe it stands to reason that there are at least hundreds, if not thousands of gulf war veterans who are suffering as badly or worse than I am who, under the

current rules will have a more difficult time, if not impossible time being granted "Service Connection" for their illness.

Members of the "Research Advisory Committee On Gulf War Veterans' Illnesses" have demonstrated that there is neurological damage occurring in gulf war vets. The VA has, based on this research granted automatic "Service Connection" for ALS, and I applaud them for that.

I would very much like to see more research being done on neurological and autoimmune disorders resulting from service in the gulf. I would further like to see the 7 year rule extended or abolished for such conditions where gulf war veterans are concerned.

One major setback I encountered in my diagnosis/treatment early on was the medical communities lack of acknowledgment in the potential for problems that are anything but psychological to have occurred from service in the gulf.

I believe that because the government hasn't openly supported non-psychological conditions manifesting from gulf war service that veterans diagnosis and treatment is tragically delayed and many conditions go overlooked for far too long.

Nearly fifteen years have passed and we're still suffering on multiple fronts. An acknowledgment to the "Institute Of Medicine", outlining neurological outcomes from the gulf war would certainly aid in our proper diagnosis and treatment.

I thank you for time.

Sincerely,

Steven S. Feldman

Warren, MI

Former U.S. Army SPC (HHC 1-35 Armor, Ferris Bks. Erlangen FRG)
Served in the U.S. Army from October of 1988 to October of 1992
Served in Persian Gulf from December of 1990 to May of 1991.

Testimony of HMC(FMF/SW) Charles D. Haner, USN(Ret),
for
the Subcommittee on National Security,
Emerging Threats, and International Relations
on
"Examining VA Implementation of the Persian
Gulf War Veterans Act of 1998"
November 15, 2005

Mr. Chairman and members of the committee, I am honored to have the opportunity to submit this written testimony concerning Gulf War Illness issues. My name is Charles Haner. I have sought to present this testimony due to the fact that in the years since I first heard of the Gulf War Syndrome, I have by the grace of God been able to witness some events and learned some facts that have put me in a rare position to speak on the problems that have led to the inability of this Syndrome to be defined and thus be treated fairly.

In presenting my testimony I will attempt to keep my statement as brief and focused as possible while still including pertinent data that might help this body to understand how I feel as a veteran and a researcher concerning Gulf War Illness. To that end, my testimony will cover six areas. First, I will discuss my own condition and status. Second, I will address my opinions on Gulf War Illness in particular, including my own knowledge as a provider, as a patient and as a researcher. Fourth, I will discuss my own observations and perceptions concerning the VA as to workflow and productivity. Finally, I will discuss the many ways that I see that the VA can improve its service, decrease its cost to perform and increase veteran satisfaction and improve outcomes.

About Myself

First, I would like to tell you a little about myself, my special history in the Gulf War Illness saga and my diseases. I am a retired Navy Chief Hospital Corpsman. I served the first half of my career as a preventive medicine specialist and the second as an independent duty corpsman. I served in the first Gulf War as the head Preventive Medicine Tech for the 2nd Marine Division in the lead up to the war and then as the Leading Petty Officer for the Regimental Aid Station for Colonel Livingston in the 6th Marine Regiment. I retired in 1998 after two years of battling various illnesses and then was finally put on disability in 2001.

My diagnoses and conditions since the Gulf War have included Myasthenia Gravis, double vision, gall bladder disease, PTSD, a liver hemangioma, sinus problems, sleep disorder, hearing loss, depression, and still undiagnosed conditions related to my memory, myopathies, muscle pains with elevated CPKs, and neuropathies. The last 10 years have been a wild ride. In fact, at one time my differential diagnosis even included Lou Gehrig's disease. Since my medical issues have begun, I have undergone surgeries to remove my gall bladder, remove a portion of my liver, remove my thymus gland and improve my sinus problems. I now take two medications a day that would cost me around $1000 a month if they were not provided by the VA so that I can walk, talk and breath as I do today. For the most important diagnosis, that of the Myasthenia Gravis, I have to thank Dr. Timothy Miller, formerly of Washington University Medical School in St Louis. It was he who finally took the time and the energy to work with me to obtain my diagnosis after my complaints fell on the deaf ears of the DOD and VA physicians.

Of course, obtaining a diagnosis and treatment was only half the issue. The other has been and still is dealing with the VA concerning compensation issues. My personal opinion of the VA compensation system is like a customer in one of those Capitol One commercials. I could sense when I went into the Regional Center that each person I spoke to wanted to say yes. They felt for my plight, they saw my need, they saw the logical justification for my claim and they felt their hearts calling them to say yes. However, from 2000 until now, the answer has been no, no, a little yes, a little more yes, another no, more little yeses and more nos. So it has been my five year battle with the VA.

Of course, I am not the only veteran who has ever faced an uphill battle with the country I fought for. In fact, in their book The Wages of War, Joel David Singer and Melvin Small discuss the battle that American veterans have faced from their own government in getting health and compensation issues addressed. For everyone on this subcommittee and anyone interested in putting veterans' struggles in perspective, I would highly suggest reading it. It is this book, my father's own struggles over his generation's broken promise of free health care for life for 20 years of service, and my won problems that brought the face of veterans' issues to my eyes. Fortunately for my father, Tricare for Life was finally signed into law by President Clinton in 90s just as he was requiring more medical care, a benefit he could scarcely afford to live without.

You would think that as a country we would have learned by now that what George Washington said was true. He said "The willingness with which our young people are likely to

serve in any war, no matter how justified, shall be directly proportional to how they perceive the veterans of earlier wars were treated and appreciated by their nation." However, the opposite position is now being taken by DOD, as Deputy Secretary of Defense Abell argues that new veterans benefits are "huge costs to the Department of Defense – and that money flows to people who are no longer serving." With these two opposing views, it makes one pause to ponder if Washington's haunting words are prophetic in our country's inability to adequately recruit for the current wars.

In fact, this statement is probably even more prophetic due to the fact that many veterans continue to fight their own government daily. Based upon conversations with numerous veterans on the internet, it seems that the VA and the federal bureaucracy is more of an adversary than an ally. From getting their doctors to listen to getting tests to get a diagnosis to getting treatment for their diseases to getting fair compensation, veterans are often left to try to figure out for themselves what course of action is next. Thus many surrender and bitterly walk away.

Because of these facts, I cannot in good conscience any longer recommend a military career to anyone. Despite that fact, I remain a patriot, who will still pick up a weapon to defend his country when the need arises.

Gulf War Illness and Me

What I find most interesting about analyses of Gulf War veteran data is that most of the diagnoses of veterans are actually signs and symptoms and not true diagnoses. And when a veteran goes to get compensation that is exactly what the VA tells them. They don't have a diagnosis even if they have symptoms, so tough luck. Yet the VA and DOD usually fail to follow protocol to help the Vet go from identifying symptoms to actually getting a diagnosis for those symptoms, thus leaving the vet in limbo on all fronts.

My own personal journey concerning Gulf War Illness began in 1996. While stationed at the Naval Air Station in Belle Chase, I began hearing rumors of a Gulf War Syndrome. Until that time, I had not heard anything concerning it. Since returning from the Gulf in 1991, I had gone to Independent Duty School and had been stationed aboard the USS Whidbey Island and had been to sea most of the time. However, once at Belle Chase, it seemed as if my body and the reality of the Gulf War's effects on veterans from the war seeped into my life and into the news.

While stationed at New Orleans, my final duty station before I retired, I discovered a lot about Gulf War illness and began to experience my own Gulf War related problems. During that

tour, members of the Disability Evaluation System presented a lecture on the Board's procedures. In the presentation, the board members assured us that there was no such thing as a Gulf War Syndrome. Additionally, they also candidly acknowledged that much of the early data gathered on Gulf War Syndrome was missing, erroneous or improperly managed. This had caused PEB to conduct a "quick fix" of Gulf War data to be able to provide Congress with only "educated guesses" as to the number of cases that had actually been seen of Gulf War related illnesses to that date, my first indication that the Gulf War Syndrome data might be suspect. Based upon this knowledge, I would suggest that this body research the data provided by the Physical Evaluation Board during this time.

Again, while working as the clinic Chief at Belle Chase, my first physical symptoms began to appear. The first problem was an excruciating pain. The pain was eventually traced to a liver hemangioma that everyone swore should not have caused that much pain. During this time, I took massive amount of pain meds to make it through the day. Yet finally, a chief surgical resident, Dr. Lukish, at Bethesda decided the surgery to remove the growth was warranted. It had taken me just two years, much begging, lowered performance evaluations, command harassment and tens of thousands of military dollars for me to finally get someone to do the right thing. Yet when it was finally removed after two years of daily torment, the pain went away. And I thought my health problems were over. At least thankfully that particular problem was finally solved.

Of course, during the time of my illness, I also discussed the possibility of my conditions being related to the Gulf War to one of my Kessler AFB physicians, Dr. Robinson. He assured me that he had also been stationed in the Gulf and that he was fine. He personally did not believe there was any such thing as a Gulf War syndrome. However on a subsequent visit, I discovered that he was beginning to have neurological problems and eventually he was diagnosed with ALS and from what I understand passed away. For the committee and VA records, I would suggest determining if his name is included in the Gulf War ALS database to ensure its accuracy.

While my physical condition was deteriorating due to the daily pain, I was transferred to the main clinics command on the West Bank. It was while I was there that I finally found out about the CCEP evaluations and decided to see if I could get one and find out if it could help. So I scheduled an exam and went to it expecting to get some answers. However, according to the

physician running the program, Dr. James Railey, his direction was to just gather information concerning the Gulf War veterans and to perform a rudimentary exam. He told me on several occasions that the purpose of the CCEP exam was nothing more than a fact gathering exercise and that any diagnosis and treatment from such exams would be based upon directions from DOD at a future date. Thus all the participants in the New Orleans area received no more than a documenting initial physical.

Then after getting my surgery and beginning to recover, I was transferred to the East Bank clinic to see patients. During this clinic rotation, I began to see a significant number of Gulf War veterans, mainly reservists, with specific complaints concerning memory issues, fatigue and muscle pain. Several of them had already been diagnosed with fibromyalgia. The odd thing is that no one had done any muscle enzyme studies on any of the patients I had seen. Upon seeing the patients I ordered the tests, in which case I believe all came back positive. At that point I referred the patients to a physician for further evaluation and to the CCEP physician, Dr. Railey, for further evaluation. Yet during that time I do not remember any specific diagnoses or treatments that were finally accorded the Gulf War vets I referred other than a documenting physical.

Over the last year of my military career, I tried to assist as many Gulf War veterans as I could. It was during this time that I also began to develop other problems, including double vision, muscle pain, elevated CPKs and memory problems. However, I was only able to get some of the issues addressed since there was and still is no clear guidance on how to properly work up a Gulf War veteran.

In 1998, I retired. Upon retiring I tried to adjust and go to work in the civilian world. For awhile I was successful as the Admissions Manager at HCA's Tulane University Hospital, but I resigned there due to management differences. I then moved to St Louis and worked at a hospital and then a third party insurance administrator (TPA). By the time I was working at the TPA, I began to have bouts with recurrent weakness and an ever increasing fatigue problems. These problems finally led to my termination at one job and my being place on disability on another.

Since moving to St Louis, I have tried with varying degree of success to get treatment and compensation within the framework of the VA. As far as the medical care, I sought a more thorough CCEP evaluation and instead got a less thorough one from a clinician who did not even

know what further lab tests he could do for further evaluations or the existence of a central evaluation center in New Jersey. Fortunately, I was finally able to get into the Neuromuscular program at Washington University were I was finally diagnosed with Myasthenia Gravis, a neuromuscular disorder. Yet this diagnosis was still questioned by the VA neurologists, even though: (a) they admit that they are not neuromuscular specialists, (b) they cannot account for any other disease that would cause the positive lab test that Washington University used to diagnose me by, and (c) they have done no other follow up neuromuscular testing to determine any other diagnosis at all.

Having failed at this second attempt to get an adequate CCEP exam, I contacted the Gulf War hotline. I received a letter from them dated December 5, 2001. The letter instructed me that the information was forwarded to Wright Patterson AFB in Dayton, OH and that I would receive a letter directing me to the closest military medical facility for an appointment. Of course, I was never contacted. Further attempts at follow up through the 800 number proved to be equally productive.

And to bring the committee fully up to date on my VA experience, on November 9, 2005, I was seen by a neurology resident who had previously tried to prescribe me Gabapentin, which is contraindicated in Myasthenics since it usually causes exacerbation of the disease and a neurologist who was an epileptic specialist who was not able to discuss my care or treatment. And neither of them was familiar with any of the literature on Gulf War neurological studies. Over all, it was still a good visit, in that the resident and I had some interesting discussions and the neurologist seemed a very nice and caring provider. After discussing future options for care, the neurologist stated he would arrange for a more appropriate neurologist for my future care. In fact, the head of neurology called that evening to personally arrange an appointment for me with another neurologist today, November 14, 2005. At this appointment, Dr. Thomas explained that in order to get better diagnostic testing done, I would have to come of the drugs that keep me breathing and moving as well as I do. He also stated that even with better results, his treatment of me would probably not change. He additionally explained that my past and current request for a Spect scan of my brain for biochemical changes would probably not be approved by the administrative staff, even if he did in fact order one for me. The good news is that after this careful discussion of where my care had been and was, he arrived at the conclusion that "if it's broke, don't fix it." And in listening to his logic and the potential risks and other alternatives I

have at this time, his analysis seemed logical and forthright, for which I was grateful, although I do have to admit some disappointment in not being able to get a Spect scan approved through the VA despite evidence that it just might shed more light on my condition.

Gulf War Illness in General

Early on, while I was a healthy health care provider, it was easy for me to accept the concept that there was no Gulf War Syndrome. Like my Kessler doctor, until I got sick myself, it was hard to imagine that there could be such a thing. However, years of personal and professional experience with the data concerning the Gulf War Syndrome have changed my mind.

In my own research and review of what is known so far, it appears that there are several good reasons to believe in a Gulf War Syndrome. First, there are too many veterans suffering from similar complaints. Second, the preponderance of scientific studies that have been completed show that there are some things wrong with Gulf War veterans as compared to other veterans and controls. Third, at least one disease, Lou Gehrig's disease, has been shown to have a direct association to Gulf War service. Fourth, some agents Gulf War veterans have been exposed to, such as low level sarin, pesticides and pyridostigmine bromide (PB), have been shown to be able to cause the very symptoms they claim. And finally, my own limited experiment with veteran health claims shows potential to validate that veterans' illness could be related to a syndrome similar to what would be expected with low level organophosphate exposures.

Yet the question remains why a syndrome cannot be found and defined by now. The reality is that in the years since a Gulf War Syndrome has been suggested; we never got back to the basics. As Dr. Haley and others have stated, we never did Epidemiology 101. Although some have defended the data acquired to date, I wish to present information that will show that the data from day one is suspect. Today, some researchers would state that since not all veterans in a group got sick that this would disprove any idea of a syndrome. However, as any epidemiologist will tell you, even in a simple exposure case, not all of those who were exposed will in fact get noticeably ill. Some will get ill, some will go undiagnosed, some will not report an illness, and some will just not get sick at all, despite all suffering the exact same exposure.

Two areas I have found of particular concern are organophosphate (OP) exposure and PB. Organophosphates of various kinds, including pesticides and sarin, have been postulated to

cause Gulf War Illnesses. Additionally, it has been also postulated that PB would have the same type or an additive effect as OP exposure. So both of these items deserve close scrutiny, separately and collectively.

In the case of PB, my own literature review and the RAND review seem to make it almost impossible to not at least have serious questions about the use of this drug in going forward for troop protection. Additionally, in my opinion, there appears to be enough evidence concerning the changes that can occur with PB that could explain a large portion of Gulf War Illnesses and these changes would be similar to low dose OP exposure.

In the case of OP exposure, I have derived a simple questionnaire assessment model that has been applied to a limited number of veterans that would suggest that a low dose OP exposure is responsible for their complaints. I based the development of the questionnaire on a program called NOHIMS, short for the Navy Occupational Health and Information System, which I helped develop in the 1980s. The program was straight forward. Up until that point, occupational health workers had to gather information on a wide range of occupational exposures to determine what a federal employee needed in the way of a physical to determine if they had any ill effects from an occupational exposure. The computer system allowed healthcare professionals to easily determine the type of physical that a person needed and to gave them a list of the exams and lab tests that needed to be conducted for that specific individual. About two years ago, I developed a simple version of a computerized Gulf War evaluation tool similar to NOHIMS. By asking a vet a series of questions, the program was able to categorize whether they might have (1) the VA's definition of an undiagnosed illness, (2) one of Dr. Haley's three syndromes, (3) a myasthenic or motor neuron disorder, (4) symptoms suggestive of similar symptoms exhibited in the Gulf War self-report study, (5) PTSD, or (6) a low level organophosphate exposure. In making it available to veterans via the internet, I had a few takers on getting the evaluation. Although only 28 vets sent in the form, 27 of 28 (96%) profiled for low level OP exposures. The one veteran who did not profile for low level OP exposure indicated that he was unsure of a number of questions, thus for those who were able to adequately complete the questionnaire, 100% showed signs and symptoms associated with low level OP exposures.

What is wrong and how to fix

In reviewing where the investigation into a possible Gulf War Syndrome is and what has

been accomplished, it is easy to see that for the hundreds of millions spent, we have very little practical, concrete knowledge and procedures in place. In total, that speaks volumes of what is wrong and why providers and veterans know little more what to do now than they did in 1992.

The problem as I see it revolves around several issues. First and foremost, Gulf War veterans' complaints are not taken seriously. Second, the baseline data is wrong and has been wrong since day one. Third, clinical guidance has not been adhered to since the beginning. Fourth, physicians are not properly indoctrinated at the Primary Care and other levels that could see a Gulf War vet for issues that could be related to Gulf War service. Fifth, Gulf War veterans are not properly screened using established protocols. Sixth, communications within the VA hampers the diagnosis, treatment, and compensation for Gulf War and other veterans. Seventh, computerized tools that could be used to improve the process have not been developed and deployed. Eighth, not enough has been done to separate possible Gulf War related diseases from other diseases with other causes. Ninth, the research has not done enough to look at clustering of diagnoses for specific diseases and complaints, such as the case with a possible association of Gulf War service and multiple sclerosis. And finally, the VA mechanisms do not allow for quality and timely results.

Before reviewing how to fix the issues I have mentioned, I'd like to point out that in one area, the ability to determine what is a Gulf War related illness and what is not is, is of personal concern to me. And one area in which the ability to validate or disprove the existence of a Gulf War Syndrome may eventually revolve around.

In particular, I would like to review the case of a Harold "Hank" Woosley. I learned of "Hank" via a referral by Steve Robinson of the National Gulf War Research Council. Hank's His wife, Barbara Woolsey, suspected that maybe her husband might have Gulf War Syndrome. He was at the time dying of leukemia and Multiple System Atrophy. Her concern was that one or both conditions might be associated with a Gulf War Syndrome. In a review of Hank's records, I noted that he had evidence that he suffered from polycythemia, a condition which caused his blood to be too thick. When I talked with Barbara about this, she acknowledged that he had actually finally begun treatment for it several years ago. Although I am not a physician, it was opinion that I had confirmed via medical sources, that this untreated condition in addition to Hank's flight status, and not the Gulf War, eventually led to his development of leukemia and at least one stroke. Yet the real sad part of this case is that the evidence in his health record proved

that Hank had elevated RBC counts and hematocrits for many years which were noted on his military flight physicals. Yet with every physical, Hank was cleared for flight duty every time. Additionally, Hank was never referred for further evaluation because he was only a reservist and thus was not entitled to such care. Unfortunately as luck would have it, Hank also suffered a decompression episode in his aircraft, the worst possible scenario for someone with polycythemia.

In the end, Hank finally succumbed to the leukemia and passed away on February 4, 2004, not of a Gulf War Illness, but of a possibly preventable disease had someone taken the time to truly evaluate his flight physical. So in the end, a simple form, a physical, with the right information was never acted on. A man was cleared for flight duty that never should have been. And this did not happen just once, but throughout an entire reserve career. In reality, this is the real reason you test for this and other conditions in the flight physical, the "just in cases," because military life is nothing more than a series of those "just in cases." And in all of this, the VA initially denied Hank's claim for compensation and treatment. At the time of Hank's death, I was working with Barbara to try to get Hank's claim appealed. As of earlier this year, I know that the VA still had denied the claim.

Fixing It.

In going forward addressing Gulf War Illnesses, the VA faces one of the most significant challenges of its time, almost on the same plane as addressing the huge influx of casualties from the new wars. In reality, some days it would almost appear that it would be far easier to begin the whole process of investigating the Gulf War Illnesses all over again. Only this time do it with an open mind and a focused and methodical epidemiologic approach. However, the reality is that too much money and time has been wasted, too much learned that is probably applicable and too many veterans need help yesterday, not even further down the road. To that end, I would suggest that the VA tackle this problem along multiple initiative groups: (1) High Impact, Short Lag Time; (2) High Impact, Long Lag Time; (3) Low Impact, Variable Lag Time.

The three initiative groups would then be divided into specific sections and addressed as section issues. In the High Impact, Short Lag Time group, the VA might find that it could achieve its best "bang for the buck" in the clinical arena. For although the long term resolution of possible Gulf War Illnesses will rely on repairing data and data analysis, the ill veteran presents him/herself in VA clinics every day. So each day the VA has the greatest ability to

impact a veteran's life. And that will begin once the VA as a whole begins to take Gulf War veteran's complaints seriously and VA physicians, as a whole, address Gulf War vet issues as they would any other medical issue. For as Dr. Frances Murphy stated in an Advance for Physicians' Assistance article back in 1995, "in the majority of cases, the history and physical provide the answers, especially when clinicians keep in mind the exposure issues reported by the press. By using standard medical techniques a majority of cases will be recognizable diseases or conditions."

In addition to this, the VA could provide a simple overview for their own and civilian providers that would outline what has specifically been learned and what kind of clinical algorithms are available and what testing is recommended. For even though these tools are available, very few practitioners know of their existence. Additionally, the VA could require that any veteran with ongoing complaints that has not received a Phase II exam be required to complete one using the existing Uniform Case-Assessment Protocol and the Post Deployment algorithm. This fairly simple method would enable the VA to identify veterans with ongoing complaints, begin collecting better data on them and possibly providing them with meaningful diagnosis and treatment options.

Chasing the baseline data would be the centerpiece of the High Impact, Long Lag Time group. As GAO has stated in several studies, the CCEP data, the plume modeling and other Gulf War initiatives have been marginal at best. As I have stated, it is my personal belief that the CCEP data that is much talked about amounts to no more than organized garbage. There is no delicate way to put it. In fact, the GAO discovered that very few veterans received level 2 exams, even though there was clear indication that the veterans continued to have undiagnosed illnesses. To remedy this, the VA in conjunction with DOD will have to rectify this major epidemiologic problem. In order to fix the CCEP, the daunting task of verifying veterans within the database's current health, including possible reexaminations, must be the absolute first step in the process of having any hope of ever solving the Gulf War Illness mystery.

VA Process Improvements

In addressing the needs of Gulf War vets, the VA should look at all the problems and processes in the light of process improvement projects. I say this because, several things have struck me concerning my impression of how the VA operates, whether it is within the medical facility or in regional compensation and education claims departments. The common factor

seems to be a lack of quality and timely resolution of issues. Some cases in point range are: (1) Gulf War veterans not being evaluated by existing protocols, (2) long delays in for any veteran in receiving even basic medical care, (3) the abhorrent practice of scheduling an appointment via a letter without a veteran's input into scheduling times (a practice that ensures high no show rates), (4) problems regarding communication within the VA system, and (5) long delays in both education and compensation claim processing.

Having had the privilege of working for two quality and production oriented businesses since retiring from the military, I can tell you that there are several mechanisms that can assist the VA in achieving better quality, lower turn around times, and lower administrative costs.

While working at Tulane University Hospital, I learned and developed process improvement methods that led to better and more accurate data and thus enable the business office to more adequately and electronically transmit data to reduce error rates and increase productivity.

The other job, and frankly, the better example of how to do claim management, I witnessed as the Quality Manager at the Epoch Group, a third party administrator, in St Louis. As an insurance group, it had developed a company culture that stressed speed, accuracy, customer service and cost control, a combination that every company seeks to achieve, but rarely even comes close. In that organization various technological mechanisms and workflow and productivity measures were used to ensure the speed of claim's servicing. One of the most valued portions of the claims processing quality improvement process at Epoch was its auto ajudication procedures, where it trained its computers to know when a claim should be automatically paid. Given the type of recurrent claims that the VA faces every day, this automated procedure should be reviewed in depth for application to the slower, more labor-intense claims processing procedures used by the VA. Additionally, I would suggest that the VA seek out a permission to observe the outstanding and successful organizational mechanisms that the Epoch Group employees. My opinion is that in adapting some of Epoch's methods, the effectiveness of all VA claim processing would dramatically improve; thereby increasing accuracy, increasing veterans' satisfaction and decreasing overall administrative cost.

The areas I would suggest the VA specifically look at are: (1) CCEP and Vet Screening, (2) Mental Health, (3) Claim Processing, (4) Undiagnosed Illnesses, (5) Veterans Communication, (6) VA Workforce Changes, and (7) DOD/VA Cooperation.

CCEP and Vet Screening. As I have stated on several occasions, the fixing of the CCEP data will eventually be the cornerstone to understanding Gulf War Illnesses. To that end, the VA must develop several mechanisms to ensure that the data can be improved and then maintained. Therefore, I suggest that the VA develop a computerized Vet Health Screening program similar to NOHIMS. The program can initially be a standalone program, but should eventually tie into a central database for better capture of veteran health status comparisons. This program should also include screening tools for veterans with atomic related illnesses, agent orange exposure, SHAD experiment exposure, PTSD, and Gulf War Illnesses Uniformed Case-Assessment Protocol. When it is fully developed a desktop version should be made for civilian practitioners' use with a mechanism to provide veteran health updates via an internet connection to a central processing unit, much as a medical insurance clearing house. This type of system design will aid front line providers whether they are DOD, VA or civilian in providing the specific care that veterans sometimes require. Additionally, this type of mechanism will allow more accurate and more current data on veterans' health issues.

Mental Health. With the estimation that as many as 17% of current war veterans will require mental health care at some time, the VA needs to begin crunching the math on how it will provide this type of care in this quantity. The cost of this treatment in the way of personnel and dollars will be a staggering, but must be addressed quicker and more efficiently than it was with the Vietnam Veterans in the past.

Claim Processing. In discussing disability claims with a VA representative in the St Louis office, he stated that in reality a veteran's "luck" in receiving the right compensation depended entirely as to which section and which desk the vet's record happened to land on. He stated that some counselors gave vets the benefit of a doubt as prescribed by law. Yet other counselors tended to clearly favor making the veteran prove their case beyond a doubt. So regarding this, the VA should look at two initiatives that should assist it in solving time and quality problems. The first solution would involve the concept of auto adjudication of all claims processed (disability, education, etc.) This computer solution involves the idea of if the vet is shown to be eligible and the benefit is valid, the system accepts those facts and automatically moves the veteran to a category that will allow payment of that benefit. In practice, this procedure would probably work best for education claims, but could assist in freeing up these assets for other uses instead of having to look for increased manpower to take care of the increased workload during

peak times. A second caveat of this system is that once in place, procedures and benefit structures could be rewritten with auto adjudication in mind, making benefit administration smoother and cheaper to manage. The second initiative would involve increasing the VA's emphasis on quality and creating a more level playing field on benefits by increasing their backend quality inspection, a mechanism that led to good success at both Tulane and Epoch. This process has been proven to increase accuracy and thus decrease rework and lead to more standardized benefits, which leads to increased veteran satisfaction, decreased appeals, and decrease in program management costs. As I stated before, I believe an observation visit to the Epoch Group in St Louis would be of benefit in assessing how these initiatives could assist the VA in becoming a more efficient organization.

Undiagnosed Illness. In its original intent, undiagnosed illness was placed in Gulf War legislation to enable the VA to have some latitude concerning treatment and compensation of Gulf War Illnesses. Yet at times the term itself is used against Gulf War veterans as much as it has been used for them. To that end, much clarification as to what this term means and how it should be applied needs to be addressed.

Veterans Communication. In a nutshell, the VA needs to "Inform Vets Better." The sad fact that veterans are barraged with contradictory and confusing explanations was well documented in a Navy Times article by Rick Maze. Again, this simple aspect of being a veteran should not involve too much brain power. A vet should be able to go into any VA facility, any veterans' group office, or even go online and get the same right answer for their service. And if necessary, the VA should develop a web based system that would identify all federal and state benefits that should then cross reference the veterans' address, disability status, appropriate VA education program, and other programs to tell them what they have earned in the way of benefits.

VA Internal Communications. In one GAO study, it was noted that a large number of VA disability claims did not meet quality standards. Part of the problem appeared to be that fact that VA regional offices often did not request the appropriate exams to get the veteran properly examined for the claim. Again, in this day and age and when the VA has a large number of standardized exams already mapped out how is this entire process of requesting an exam not automated?

VA Workforce Changes. In light of the cyclical work of certain aspects of VA workload, such as in education, could not the VA look at long term flux temp workers, similar to people used

during tax season to assist in the onslaught of claims during known peak times? In addition, couldn't the VA look at military wives, disabled vets, or stay at home parents for 4 hour days during peak times using remote processing software?

DOD/VA Cooperation. Overall, I agree with Congressman Buyer's assessment of the lack of connection between the VA and DOD. In an October article for the Navy Times, the Congressman tells of how DOD and VA medical cannot connect despite years of attempts and millions spent on various projects to try to make the transition seamless. However, I would go the Congressman one further. Even within the VA itself, the connection between medical, disability, education and VocRehab seems almost at times non-existent. Thus you have it that in my own case where I had to provide copies of my DD214 and other documentation to all these entities separately in order to be evaluated for various programs. In improving all these lines of communication and cooperation, the veteran will win and the cost will end up being considerably less for the nation.

Additional studies

In looking to the future, there are a few studies that I personally see as having potential huge benefits for determining the nature and possible treatment of Gulf War Illnesses. These studies include: (1) Accident Incidents, (2) Cluster Deaths, (3) a Cross Country Epidemioloty Study, (4) Memory Deficits, (5) Multiple Sclerosis, and (6) Revisiting Khamisiyah.

Accident Incidents. In all the epidemiological studies to date, few items pop onto the radar screen, including accident incidents. However, in no literature did I find any documentation of the suspected cause of this increase. With the fact that concentration is one of the chief complaints of Gulf War veterans, their wives and employers, it would be reasonable to look for a possible organic cause for this increase in accidental deaths.

Cluster Deaths. Although there have been a few reports that suggest that the mortality rate of Gulf War veterans is not higher than the general population except in cases of accidents, I sometimes wonder if all the data used in the studies is correct. I especially wondered about that fact when in September 2003, a veteran who visited my website sent me an email of the Gulf War veterans that he had found who had died and were buried at the Ft Mitchell VA cemetery. The interesting thing is that these 82 names died at an average age of less than 42 years old, with the youngest being 19 at the time of his death in 2002 and the oldest 63. Although he did not know what they died from, he thought it odd. Of course my questions for this body are: (1) have

these deaths been included in the study that says Gulf War vets aren't dying, (2) have other VA cemeteries been combed for Gulf War veterans and included in these study numbers, and (3) have civilian records been managed as to find Gulf War veterans who have died away from the system and thus not included in these statistics?

Cross Country Epidemiology Study. There is strong evidence that not all countries that participated in the Gulf War have experienced health complaints to the level of the US. It would therefore be prudent to identify all factors that make US service different against countries with similar levels of health complaints and those with fewer health complaints. Any items that fall into the "difference" category should then be explored. These items could include, but may not be limited to location, PB, and DU.

Memory Deficits. Along the same lines as the accident deaths, there should be further studies into Gulf War complaints of memory issues. It should be noted that this type of exposure has been shown in one government study to "result in varying degrees of protracted impairment in learning and recall" and that impairment "may be proximately related to the reduced expression of central nicotinic receptors in the hippocamus," an area of the brain that other studies have found Gulf War Veterans to have a biochemical change in. And lastly, the study states that "it may be possible to reverse the cognitive impairment associated with OP exposure by specific pharmacological intervention."

Multiple Sclerosis. There are several diseases that I feel should be investigated for a positive relationship with Gulf War Service. Of course, the first I would feel that needs to be evaluated is Myasthenia Gravis. I say this not because I have it, but because of its relationship to PB and Lou Gehrig's disease. However, on reviewing some statistics that were provided by Steve Robinson of the National Gulf War Research Council, multiple sclerosis should get an intense look. Using just the data he provided, it would appear that a male Gulf War veteran has a 2.5 times more likely incidence of MS than a non-deployed male. It therefore makes it likely that with better and more accurate data on this disease subset, data might be readily available to prove a link between Gulf War service and MS.

Revisiting Khamisiyah. As has been stated by the GAO, the studies of sarin fallout and other hazardous fallouts are seriously flawed. More needs to be done to rectify this issue and to more adequately determine the true nature, good or bad, regarding this issue. The truth about

accidental chemical release before, during and after the war along with intense epidemiological analysis of this data is almost as important as the rectification of the seriously flawed CCEP data.

Final Notes

On another note, while it is not the purview of this committee hearing, I would like to ask the committee to explain to me and to the millions of veterans affected several questions. First, why is it that the Congress of the United States cannot find it within themselves to allow for the VA to have mandatory funding for veteran health care? Will the VA forever be forced into almost shutting down like this year due to lack of sufficient funds? Second, why is it that Congress continues to allow the VA to close its doors to the category 7 and 8 veterans, even though by law they should be allowed in? Third, why is it that a military family must lose a portion of their income when they deploy or are in the hospital with their subsistence allowance? The argument has been made in the past that they receive more compensation in deployment monies and that after all they are now eating government food. To those arguments, I say "hogwash." Such logic tells me that none who make that argument has ever been a married junior enlisted man on his first cruise. Trust me, those young sailors and their families are the losers in that arrangement. The effect of that small lose to that small family is the sometimes devastating, causing a financial and emotional drain that has lead to some very unintended consequences, such as marital strife during what is already a high stress time and even divorce.

Additional Questions Concerning the VA

1. Since GAO's 2004 report "Federal Gulf War Illnesses Research Strategy Needs Reassessment," has the VA finally analyzed the studies to find out where we are concerning the investigation into Gulf War Illnesses? If so, will the VA provide a summary of the status of the research to date?
2. Has the VA improved its practitioner screening procedures that were noted as deficient in 2004?

Summary

Despite all of my problems past and present, I am one of the fortunate ones. I talk to vets all over the country who tell of many similar physical problems, but unlike me they lack the medical knowledge and plain old persistence that I do. Many have given up on the government and the nation that they have fought for and suffered for. They have quite frankly given up on the system: the VA and the government they swore to defend.

Yet the problem is not with you or with the government's desire to assist myself and the hundreds of thousands of other veterans suffering from one war or another. The problem is not really with the front line physicians who wish they could help or at least had the knowledge of how to help the veterans. It is my opinion that the problem lies at the top: within the VA, DOD and in Congress. The problem is like a train waiting to move, each car waiting on the engineer to put it all in motion forward in one direction. Unfortunately for the veterans, they are the caboose waiting to be pulled forward. In front of them are the healthcare providers also waiting to be pulled forward by this massive locomotive. In the fuel bin, 80% of the over $200 million dollars worth of research data sits waiting to be used. In the locomotive itself, sits the three engineers of the VA, DOD and Congress. Isn't it about time someone stroked the engines so this train can finally move?

Name: Cherie L Poore
[redacted]
Winchester, Va. [redacted]
[redacted]

My name is Cherie Poore, I enlisted into the US Army on January 12th, 1989, till June of 1994. I was stationed at Ft. Lewis, Washington State. I was in 543rd Supply Company when I went to the War. My company went over in October of 1990 and I was there until the end of February of 1991. I was flown out early due to a cyst that formed on my Right Ovary during the War. My company was in Saudi Arabia until October of 1991.

We were first sent to Cement City, I believe near Dharan, Saudi Arabia. We were there, pulling guard duty on the compound and I was a driver for my Lt.

We then went to a place in the desert called the TM Yard. I started having problems when I was at the TM Yard. It was just a place in the middle of the desert with a fence around it and 3 or 4 companies there. We pulled guard duty there too until we started getting our mission. I believe
that is where we got our first Scud Attack.

I started developing pains, when I would sit down, with all of my gear on. I also had a discharge after I would urinate, that wasn't a normal thing for
me to have, ever. So, one of my platoon leaders took me to the hospital, but it took about 4 times before they found out what was wrong, because they
wouldn't let me see the GYN Doctor. They thought that I had a Urinary Tract
Infection, but that was incorrect. When I finally got to see the GYN Doctor, he examined me, told me to pack my bags because I was going home. I
had developed, during the war, a 7.8 CM Cyst on my right ovary. First, they
sent me to UpperHayford, England. Then I was sent to Walter Reed Hospital and had a Laproscopy and they drained the fluid from my cyst. After some rest, I was sent back to Ft. Lewis, Washington.

A few months after coming back home, I started getting terrible Migraine Headaches and Severe Sinus Infections. I was seeing the clinics for these problems. Then, some time in 1992, I was at work on Ft. Lewis, when I became very dehydrated and weak. I went to the TMC on Post and they sent me
home afterwards, for three days rest, I could not even take care of myself. I feel that they should have admitted me to the hospital, but they didn't. Soon after, my entire body failed on me. I was kept in the Army an extra 6 months after I wrote a letter to my Representative in Florida, Senator Bob Gramham. He had the Army keep me in for further testing. My doctors were showing interesting in the beginning and wanted to find out what was the problem with my Kidney's, but soon after the testing began, they started coming back to me and telling me it was all nothing and they didn't know what to do.

Between 1992 and after I got out of the service in 1994, I was diagnosed with these problems.

Problems with my left leg. Stiff, very painful.
Migraines
Chronic Fatigue syndrome/Fibromyalgia
Chronic Renal Failure with Leaking Protein in Urine w/ Highblood Pressure
Chronic Sinusitus Poly Cystic Ovarian Disease w/multiple cyst on Ovaries, high testosterone Chronic Allergies TMJ Anxiety Depression PTSD Weight Gain

Recently, I was flown to the Washington D.C. VA Hospital, in 2004, to get tested for the undiagnoised parts of my health problems. This is what they found:

9mm cyst near Madula, they also call it a lesion.
Sleep Apnia
Restless Leg syndrome

There have been no treatments for any of my health problems. I am on one highblood pressure pill.
There have been some treatments for symptoms of my health problems. I was on Antibiotics for my Kidney problems from the war (I believe I was told they found e-coli in my urine), Birth Control Pills for my Poly Cystic Ovarian Disease for 5 years.

In 1997, I was awarded a 100% rating from the VA Hospital at American Lake in Tacoma, Washington. 80% with 20% Unemployablity. Broken Down it goes:

60% for Chronic Fatigue/Fibromyalgia with Depression and Anxiety 30% for Kidney Problems 10% for Urinary Condtion (that is the PCOS Disease).

I receive $2,299.00 a month on permanent disability.

I also receive full Social Security pay for $720.00 each month.

I have been sick with Gulf War Illness since the war in 1991, when I developed my cyst. I have one of the worst medical cases with so many multiple illnesses and I have never been contacted by anyone in the government, seeing if there is any further help they could be or inform me

of new and important information, I have been lost in the system even though
I fought for 15 years for myself and other ill vets. I have spoke to people
in congress, on the news, I have been on the newspapers, Patient Reps at the
VA Hospitals, the Director of the Hospitals, Dr. Steven Hunt of the Gulf War
Clinic at the Seattle VA. My Primary Doctors, doctors on the outside. And
so many more people, it would take all night to list. And never ever any
concreate help available.

Even with so much outreach that I have done, I was completely lost in the
system, no one ever contacted me and I live alone with no support. How many
other veterans from the Gulf War are in this same situation after all of
these years, I am sure many. I would believe that a Gulf War Veteran with
my serious medical conditions would be on a very high priority list for
contact. When I suggest to be fee based on the outside, that is always
denied because my doctors tell me, they are doing everything they can to
treat my symptoms and that is enough under their guidelines.

I have educated myself over the years and talked to hundreds of people on
this subject and many different doctor's about my health concern's. There
has always been a running theme said to me from each doctor. We have no
"Scienctific Evidence," that there is a Gulf War Illness, so therefore,
there isn't any proof that you are even sick, until the Government tells us,
that you, Cherie Poore are sick. If I say to the doctor's or write letters
on my behalf, saying that I am not getting my health concerns looked into or
met. The doctor's tell me that, they are taking care of all of my health
concern's. This is NOT TRUE, the doctor's are treating any "SYMPTOMS", that
come up, they have NEVER Looked for a cure for me and my request for an
unbiased doctor to review all of my concerns is turned down. Most Veteran's
can not pay for outside doctor's and shouldn't have to, if our care would be
unbiased in the VA Hospital's.

Most of the veteran's that I have helped and talked to, say that get told
they are crazy all of the time, by their doctor's and people they are sent
to and they get ignored when something is physically wrong with them, they
are told it isn't anything, no matter how serious the health problem is.
They have told me, that they give up and accept their life because they get
treated so poorly by the doctor's and the system. Having Gulf War Illness
is like having a hugh red flag for most of us vets, for bad treatment in the
system.

My suggestions:

There needs to be an unbiased medical review from medical doctor's who could

work with each veteran one on one and follow our illnesses, it is impossible
for different doctor's in the VA Hospitals to be treating sick Gulf War Patients, that works for other Veteran's but not for Gulf War Veteran's. Due to our exposure, we have special circumstances and need to come together
for a cure. Then, a combining of the illnesses that us vets have and try to
see a pattern and a connection for a cure.

For example, I was told recently by a Gulf War Veteran with MS, that if they
diagnoised me with Fibromyalgia in 1993 and they found my lesion in 2004, there could be a chance that I have MS. I was suprised to hear this. But, when I was at the D.C VA Hospital and got my evaluation, it was never suggested to me, not once, that when they found the lesion that I should have a Spinal Tap to rule in or out if I do have MS. As a matter of fact, I
was told by D.C, that I didn't have MS, but there is no way to know that if there isn't a spinal tap. The Fibromyalgia is a catch all diagnoisis for more serious problems and it hurts us veterans, more then it helps us, to be
undiagnoised with our illnesses is an excuse for doctor's to not have to find a cure.

It has to stop under any circumstance, with an e-mail sent to all VA Hospitals that NO Veteran from the Gulf War get called Psycosomatic, unless it is proven that they are that way. After all of these years, in 2004, I was called that when I went for my testing in Washington D.C. This is 15 years later and the same abuse is still going on with us, this has to stop. They gave me an evaluation and found out that I have Neurological Problems and listed in my records as being a malinger and Psycosomatic, with Le Belle
Indifference. This is not respect to our Veteran's.

Then afterwards, they did the MRI and found out I DO have Neurological problems because of the lesion that they found. I was even told that if I just lost weight I would feel better. I can't be receiving a check each month from the VA if it is all in my head. Once negative information is put
into a Veteran's record, it can not be removed. I have so much incorrect information that when the doctor's look at my record's or other veteran's, they have a more difficult time not judging us and it hurts our treatment.

All I have ever wanted and most of us veteran's want is our health back. Our war started when we became ill from the Gulf War and are considered outcast to many. We are great Veteran's who have done a great service. Don't let us down.

Thank You, Cherie Poore

Testimony of Carl James Musgrove
Before The
Committee on Government Reform,
Subcommittee on National Security, Emerging Threats, and International Relations,
Titled:- VA Implementation of the Persian Gulf War Veterans Act of 1998
On the 15th November 2005

Mr. Chairman and members of the committee, Carl James Musgrove is honoured to have the opportunity to submit written testimony for today's hearing on the US Veteran's Agency VA Implementation of the Persian Gulf War Veterans Act of 1998

Carl Musgrove, who lives in Wiltshire, UK, is a 46 year old ex British Army officer who served in the Regular Army from 1978-1994, and the Territorial Army from 1996 – 1999. He is currently employed as a Physics and Computer Teacher, and is happily married with two children. He was diagnosed with Parkinson's disease in February 2000. Early symptoms began in 1991 after the Gulf War. He developed a lazy right arm, which would trail at the end of runs.

Taking little interest in either the causes of Gulf War Illness or Parkinson's disease, at the beginning of 2004, he became aware that Nerve Agent Pre-treatment tablets (NAPs), made from the chemical Pyridostigmine bromide, operated in the same area of the brain as dopamine production and then in mid June 2004, read of the research by Dr Haley of the University of Texas.

Carl served for 15 years in the British Army and has an honours degree in Applied Science. He served in the rain forests of Belize for a year, lived in West Germany for two years, spent two winters in Norway and also visited many other countries. He exercised with the US Rangers and USMC, briefly with the French Foreign Legion as well as with several other NATO countries.

During the 1991 Gulf War, he served in the Special Forces cell at Headquarters British Forces Middle East in Riyadh. He was not a member of the Special Air Service. His primary role was liaison at the USAF, Tactical Air Control Centre working with General Chuck Horner and representatives from most of the Coalition Air Forces.

He took NAPs. On the 5th March 1991, he was part of a group that visited Jallibah and Tallil Airfields to assess the damage caused by the RAF's runway denial bomb JP233. Tallil is approximately 25 miles to the NW of Khamisiyah. The first demolition at the Khamisiyah ammunition dump had taken place on the previous day.

At the beginning of the 2005, Carl circulated a paper entitled "Review of Illnesses suffered by 1991 Gulf War Veterans from Australia, Canada, France, the UK and US". See http://mysite.wanadoo-members.co.uk/coalitionforcegwi or send for a copy if required. It was reviewed by several people including Professor Malcolm Hooper. The principal conclusion that Pyridostigmine bromide is the, or predominant, cause of Gulf War Illness will need tempering. In early April, it was forwarded to the Research Advisory Committee on Gulf War Illness at the US Veterans' Agency.

The recommendation of his review that Pyridostigmine bromide should be withdrawn for use as a nerve agent pre-treatment is still valid. He was dismayed to discover that Pyridostigmine bromide had been used again by UK forces in 2003. UK service personnel were made to sign ethically debateable disclaimers; one UK Government official told Carl that this was good medical practice, but another said that disclaimers were not "central policy". He believes that the use of Pyridostigmine bromide in 2003 was reckless if not criminal.

Carl was pleased to read that the US Government had awarded a contract for research into a new prophylactic for exposure to nerve agents.
"A Frederick-based division of Computer Sciences Corp. has won a Defense Department contract to make an enzyme that may help protect people from chemical warfare agents such as Sarin." TheWBALChannel.com and WBAL-TV 11 News, 14th April 2005.

This testimony is solely concerned with the possibility that Parkinson's disease is associated with 1991 Gulf War service, and that in UK personnel it is also associated with 2003 Iraq War service. This testimony has been written at short notice.

Carl does not receive federal funding from either the UK or US Governments.

Personal Account of Carl Musgrove and Parkinson's disease

In August 1991, I went on a six week deployment to Botswana; I was training hard in preparation for returning to a commando unit having spent two years as a staff officer. On a couple of occasions I noticed that my right arm was trailing. On my return to the UK, it happened once or perhaps twice before the temperatures fell with the onset of the Fall, and then nothing. Heat exacerbates Parkinson's disease symptoms in some individuals.

It is not surprising that some general practitioners and other doctors are poorly informed about Parkinson's disease. The number of cases that they may see is typically small. During my nine-year period of neurological weirdness between 1991 and diagnosis, I visited various doctors with what I now recognise as Parkinson's disease symptoms. Repetitive strain injury and permanently damaged ligaments in my right ankle were suggested diagnosis. The outgoing Chief Executive of the UK Parkinson's disease Society called earlier in the year for better training of general practice doctors.

During this period, after I had left the Regular Army, I had countless interviews for jobs. I was frequently told that I lacked enthusiasm or didn't interview well. I have been rejected for even minor promotions in my teaching career, and immediately before diagnosis I was under threat of incompetence proceedings. Since then my school has been exceptional in helping to keep me in employment. I use a radio microphone to help me communicate. Some years ago, I told the pupils that I had been run over by a tank, and this satisfies their curiosity. Are young people in the US as gullible?

However, since 1991 when my first Parkinson's disease symptom emerged, I have achieved a great deal. I have retrained as a teacher, completed several parachute jumps, led a group are 18-year-olds on a two-month expedition to the rain forests of Queensland as well as much more. Immediately before my diagnosis, I fulfilled a long-term ambition to qualify as a scuba diver. On one dive I was perilously close to running out of oxygen due to my exertions as I fought to swim level.

After diagnosis, I felt a great deal of guilt over the effect my illness would have on my family. I had always been frugal with money and worried about the future, particularly in terms of finance. I started programming an integrated management system for education, with a view to starting a business when I was forced to retire from teaching. I spent many nights programming, and I now have a marketable product .My system has coped well with about 6000 pupils completing online examinations.

This excessive work, the relentless pressure of living with Parkinson's disease, the death of a friend during the Iraq War as well as that of my father in law after nearly a year in hospital took its toll, and between 2003 and 2004 I suffered intermittent depression and anxiety. In the summer of 2003, I was

diagnosed with having delusions due to my core medicine, and it was withdrawn. This felt like having my legs amputated.

I was lucky to have a relative of my wife who suffers from MS. She told me about the psychological effects of chronic illness, and eight long months later I got an appointment with a psychiatrist who diagnosed anxiety and my medicine was fully reinstated. During the period of my three psychiatry appointments I had what can only be described as a spiritual experience. One morning, I woke with the usual depression and anxiety, but by the evening my mood had changed totally. That night, for the first time in three years, I slept solidly for eight hours. I can understand people attributing such experiences to a heavenly body but I attribute it to my own self belief.

I do wonder about this period of depression. Who is right, the psychiatrist or the neurologist? Over the last two or three weeks, I have been in correspondence with a Gulf War Veteran with Parkinson's disease from Florida who has been withdrawn from his medicine; he is taking my story to his doctor.

My neurologist has explained that in early onset Parkinson's disease patients the cause is thought to be a genetic susceptibility with an environmental trigger. "*Many researchers believe that a combination of these four mechanisms — oxidative damage, environmental toxins, genetic predisposition, and accelerated aging — may ultimately be shown to cause the disease.* "
http://www.ninds.nih.gov/disorders/parkinsons_disease/detail_parkinsons_disease.htm#45563159

In my case, exposure to pesticides in Belize in 1981 seems a possibility and is supported by the view that the trigger to Parkinson's disease could be up to 15 years before the emergence of significant symptoms. My son died from cot death in 1989, and stress has been thought of as a factor. However, while I appreciate the distribution of Parkinson's disease by age means that I could simply be unfortunate, there are too many coincidences which point to the 1991 Gulf War. In particular, the number of cases where patients have described first symptoms either during the Gulf War, or soon after, is worrying.

During a recent talk by a medical researcher on unusual Parkinson's disease symptoms, I was surprised to realise that all but one were symptoms regularly discussed as Gulf War Syndrome symptoms by members of the American Gulf War Veterans Website message board. In a recent conversation with a member of a UK Gulf War veterans' organisation, he noted that my voice sounded like another member suffering badly from Gulf War Illness. A quote by Dr Haley says that *"the symptoms that we see are characteristic of well known diseases of the brain, for example in the basal ganglia, Huntington's disease and Parkinson's disease."*

Although the symptoms of Parkinson's disease are generally thought to remain hidden for years another mechanism exists. The chemical mptp, inadvertently discovered by recreational drug users abusing contaminated drugs, is used to induce Parkinson's disease in marmosets being used in animal experiments. The disease takes hold within days and unlike some induced forms of parkinsonism it is irreversible. Mptp has a chemical structure similar to the pesticide Paraquat.
http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1187132

I hypothesis that my Parkinson's disease was caused, or triggered, by toxins, possibly Pyridostigmine bromide, during the 1991 Gulf War.

Numbers on 1991 Era Military Personnel Suffering Parkinson's disease from Australia, Canada, the UK and US known to Carl Musgrove

Introduction .

There are no reliable statistics on the incidence or prevalence of Parkinson's disease amongst military personnel in the UK. In the US, a survey comparing deployed versus non deployed 1991 Gulf War military personnel has been requested by medical researchers. These notes have been written as a result of a quick analysis of the basic details from individuals serving in the military forces of several countries. Comparisons have been made with Rochester County data which may be unfair since Parkinson's disease is thought to be increasing in developed countries. In any case, the number of sufferers may be higher than in civilian populations, due to occupational risks. Also the population distribution by age has been assumed to be the same as the UK for all countries.

Sources. The list of cases at Appendix 1 has been complied after a search for sufferers that can be described as cursory. Cases have been added to Appendix 1 with caution but uncertainty exists in some cases.
The sources were limited to:-

(a) Knowledge of the Parkinson's disease communities in three counties in the UK.
(b) Conversations with Larry Cammock, Chairman, UK Gulf Veterans' Association.
(c) Membership of Yahoo's MSVets group, MSN's young parkinson's group and MSN's Gulf War Veterans' group.

Numbers of Cases - Summary Appendix 1

Country (Force Size)	US (696666)	UK (53462)	Australia (1873)	Canada (4500)	Total (756501)
Navy	3				
Marines	2				
Army		2	3		
Air Force	1	1			
Other		1			
Not known	13	1		1	
Total	19	5	3	1	28
Expected Numbers Rochester County data; Poisson distribution; < 40 years at diagnosis; 60% of the countries population < 40 years	46.6	3.6	0.1	0.3	50.6
1991 Era but Gulf War Veterans ?	1	3		1	5
1991 Era but not Gulf War Veterans ?	3 (one deployed to Italy; one received jabs in Japan)	4			7
2003 Iraq Invasion Veterans	1				1

For the 19 Gulf Era veterans whose dates were available, the average age at which they exhibited first symptoms was 31 years, and the average age at diagnosis was 39 years. Five, out of six, Gulf War veterans, for whom the information was available, had taken NAPs.

Prevalence

Rochester County Survey figures give a prevalence for Parkinson's disease of 200 in 100000 of the general population. 15% and 5 % of these 200 are under 50 and 40 years old respectively
The prevalence amongst Gulf War Veterans from Australia and the 24th Seabees battalion is much higher than expected, and the number of five UK GWVs shown is above that expected.

Estimates of prevalence of Parkinson's disease in UK GWV

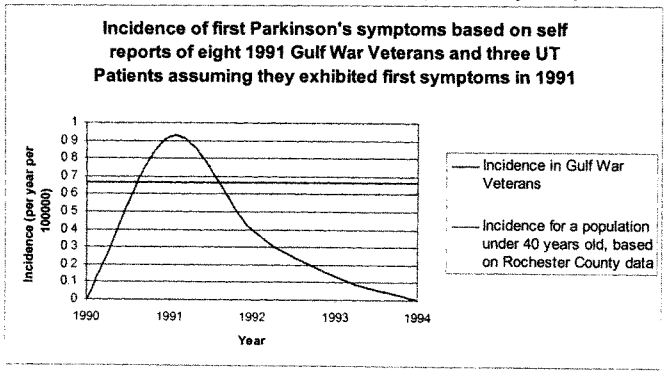
Since the Author has taken little interest in either Parkinson's disease or Gulf War Illness until recently he believes the prevalence is higher than the figure shown. It is recognised that estimates may minimise or exaggerate the problem.

By extrapolating statistics from the UK Medical Assessment Programme (MAP) at St Thomas' Hospital that two Parkinson's disease cases have been examined out of a total of about 3000 patients, a number of about 30 sufferers is estimated. Larry Cammock, Chairman, UK Gulf Veterans' Association, believes between 15 and 20 cases exist. Since the numbers of Gulf War Veterans with Parkinson's disease in Dorset, Wiltshire and Norfolk are 0, 1 and 2, an average of one per county gives approximately 70 cases.

MAP would argue that they have seen the most ill veterans whereas others would advocate that a silent majority of veterans have yet to come forward. Neither can the nature of Parkinson's disease, known as the "silent disease" with its element of depression be ignored. Some sufferers may not associate their Parkinson's disease with the Gulf War, and the story of a journalist later in this testimony is an illustration.

Incidence

Rochester County Survey figures give a incidence for Parkinson's disease of 20 in 100000 of the general population. 15% and 5 % of these 20 are under 50 and 40 years old respectively



The number of cases shown is an underestimate of the actuality. It is not unreasonable to suggest that a proper survey would show that the prevalence and incidence of Parkinson's disease in military personnel is higher than a comparable civilian group. An epidemiological study should be conducted to determine the reality.

Ecological link between a nation's uptake of Pyridostigmine bromide and the prevalence of Parkinson's disease in Gulf War Veterans

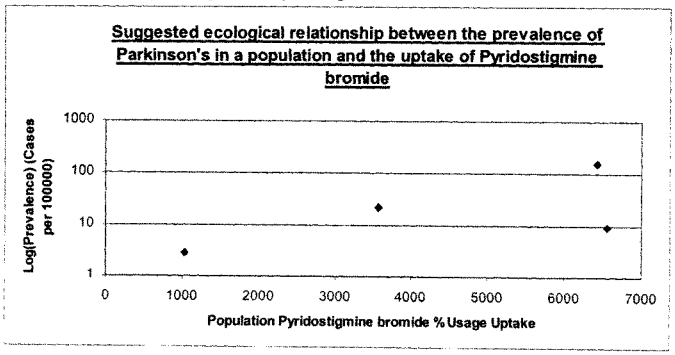
"Review of Illnesses suffered by 1991 Gulf War Veterans from Australia, Canada, France, the UK and US" shows a relationship between the incidence of ALS and uptake of Pyridostigmine bromide for a population. The protocols for taking Pyridostigmine bromide varied between the four countries considered. The uncertainties in the figures for ALS cases are likely to be small due to the publicity the disease received. A UK actuary described my work as statistically insignificant but convincing. With the records available to the DOD, it would be easy to confirm the relationship.

Applying the same method to Parkinson's disease is less successful because accurate figures on sufferers are not available. The origins of the data in the table below are available if required.

Strengths of Military Forces in 1991 Gulf War and Percentage who took Pyridostigmine bromide

	Australia	Canada	France	UK	USA
Personnel Deployed Aug 90 to Jul 91	1873	4500	20261	53462	696666
Percent NAPs Usage (Self Reports)	51	85	62	82	49
Average Duration NAPs Taken / Days	42	14	4	40	7
Average NAPs Taken Daily / NAPs Tablets	3	3	3	2	3
Average Individual Uptake PB / mg	126	42	12	80	21
Population Percent Usage Uptake	6426	3570	744	6560	1029

The graph below suggests that the number of Parkinson's disease sufferers in a population maybe dependent on its usage and uptake of Pyridostigmine bromide.



Since the known numbers of Parkinson's disease sufferers is likely to be an underestimate, the graph cannot be considered accurate. Further investigation is needed.

If the relationship was confirmed, it could be used to predict how many UK service personnel who took Pyridostigmine bromide during the 2003 Iraq Invasion have started their sentence of "neurological weirdness" before diagnosis.

Another Coincidence – Gulf War Journalist with Parkinson's

One Friday afternoon in early November 2005, I was sitting wearily in front of my PC at the end of week's teaching having just dismissed 30 excitable children, and half heartedly making small talk to the cleaner. I was doing some internet research into military sufferers of Parkinson's disease particularly those who served in the 1991 Gulf War. Another "coincidence" was flickering on my rather decrepit computer screen.

"The latest production from award-winning Belfast company, DoubleBand Films, is to be broadcast at 9pm on Thursday 19 August 2004 on Channel Four.
Produced by Diarmuid Lavery and directed by Michael Hewitt, the documentary follows the dramatic story of journalist David Beresford, who suffered the first symptoms of Parkinson's Disease while covering the Gulf War of 1991. As it progressed, the disease left David with severe tremors, difficulty in walking and he became increasingly confined to his house. Desperate for treatment, after several years David discovered a pioneering operation being developed by surgeons in France. A brain operation that would last up to eighteen hours – and for which he would have to remain conscious. "

David Beresford, now 58 years old, lives in South Africa, and wrote for The Guardian and the Observer, both reputable British newspapers. David wrote that "*the conduct of war is familiar to me, because I am a former war correspondent. It was during the imbroglio in the Gulf, in 1991, which I prefer to describe as a virtual reality event, that my personal war began, although I did not recognise it at the time. It started while I was sitting in the back of a Land Cruiser, scribbling a story on the liberation of Kuwait as we hurried across the sands to the telephones of Saudi Arabia and London, when I exclaimed half to myself, half to my companions: 'That's strange, my handwriting's gone funny.'*" http://www.martinpurchase.org.uk/downloads/PDFS/observerpd.pdf There is nothing noteworthy in that paragraph, as I have spoken to several Gulf War Veterans who believe that their first Parkinson symptom occurred during, or soon after, the 1991 Gulf War.

David's period of neurological weirdness, the time lag between the emergence of the first symptom and diagnosis, seems much shorter than the sufferers I have met. Perhaps his disease is more aggressive, perhaps he exhibited tremors, or perhaps he enjoyed more thorough scrutiny at the National Hospital for Nervous Diseases, Queen Square, London, than your ordinary citizen, and he was diagnosed about a year later. For many veterans this period typically lasts for eight or nine years. It is characterised by confusion, misdiagnosis by doctors, denial, rational procrastination, humiliation, anger and increasing apprehension. It may result in relationship, social and employment problems.

When David wrote the following in 2002, he apparently did not understand the extent of the links between the Gulf War and of his illness. *"Pesticides - as a foreign correspondent, that was enough to fuel my imagination. The coincidence that my first symptom - cramped handwriting - appeared while I was covering the 1991 conflict in the Middle East offered a pointer to "Gulf War syndrome". The discovery that South African military intelligence had me under surveillance at a time when they were poisoning critics with organophosphates offered another line of speculation. Both seem to fall on the absence of any undue incidence of shuffling and shaking among my Gulf colleagues, or in the anti-apartheid community. "*
http://www.guardian.co.uk/health/story/0,,773520,00.html#article_continue Like all of us he was isolated from other veterans of the Gulf War with Parkinson's. Presumably he accepted like many of us that we were simply unfortunate. What is surprising in his case is that he has not pieced together the evidence, even with all the investigative powers of a national newspaper behind him.

What chance has an ordinary soldier got of making sense of it all ?

Time Lag between the emergence of first symptoms and diagnosis

Lost brain cells

Parkinson's disease is a long-lasting (chronic), often progressive illness. In most patients, 70 percent to 80 percent of brain cells in the substantia nigra are already lost by the time symptoms first appear.
www.intelihealth.com/IH/ihtIH/WSIHW000/9339/11072.html

Initial mild symptoms

The first five years of the disease is generally marked by mild symptoms.
"www.reutershealth.com/wellconnected/doc51.html"

Time lag between first symptom and diagnosis

For the time lag between the recognition, probably in hindsight, of a first Parkinson symptom and diagnosis, a range of 1 to 12 years with an average of 7 years is indicated. The main factor involved in the time lag maybe whether or not a patient shows tremors. The sample size is statistically insignificant. A larger sample, but of civilian sufferers. gives a range of 3 to 15 years with an average of 8 or 9 years.

War Pensions

This time lag means that Parkinson's disease sufferers are disadvantaged when applying for war pensions or the US equivalent.

Research linking Military Service with Parkinson's disease

Exposure to Mosquito Pesticide
European Commission scientists working on the Geoparkinson study found "that heavy exposure to pesticides increased the chances of developing Parkinson's by almost 50 per cent". (New Scientist magazine, 26th May 2005)

Frequent Exposure to Aircraft
"The DETR has instituted a series of day conferences, entitled *Aircraft Health and Safety*. The first conference was held at the Medical Research Council Institute for Environment and Health at Leicester University, on Thursday, November 30 2000. One of the delegates was Bruce D'Ancey, a Senior Technical Officer with the British Airline Pilots Association (BALPA), and he, with the representative of the Civil Airline Authority, raised their concerns about the issue of ill-health being experienced by aircrew and passengers, possibly caused by vapour from organophosphates used as lubricants in aircraft fuel leaking into aircraft cabins. This was accepted as an issue that must be addressed among many others at future meetings. This reverses the recommendation of the House of Lords committee that this was not an issue worth pursuing". www.opin.info/op_air.php

Frequent Exposure to Propellant Fumes – Artillery, Missiles and Small Arms
OP, manganese and other toxins are present in propellants.

Minor bumps to head while boxing / parachuting
The Geoparkinson study scientists also identified other, stronger risk factors. "A family history of Parkinson's disease increased risk by 350 per cent, while being knocked unconscious raised it by 32 per cent." (New Scientist magazine, 26th May 2005)

Frequent Exposure to Electro-Magnetic Radiation of various Wavelengths

"There were statistically significant associations only with cerebral degeneration (ICD-9: 331 (.0, .7, .9)) and Parkinson's disease degeneration (ICD-9: 332 (.0, .1)), in relation to the reference population."

"a strong association between the occupations of the communications and electro-electronics group and deaths due too nervous system diseases was noticeable, especially in relation to the disease sub-categories of cerebral degeneration and Parkinson's disease."

Occupation and mortality in the Brazilian Navy, Rev.Saude Publica vol.38 no.5 Sao Paulo Oct.2004

Desert Deployments

"Greater mortality due to nervous system diseases in UK soldiers who served in desert areas in comparison with UK sailors or airmen" Mortality among UK servicemen who served abroad in the 1950s and 1960s, Darby et al, Br J Ind Med 1990;47:793-26

Military Deployment may raise risk of Parkinson's Disease

In a study of 659 men aged 32 to 95 years, men who were deployed to World War II were twice as likely to develop Parkinson Disease's, compared with those who did not serve. However, men who served at the time of World War II but were not deployed faced no increase in risk. Similarly, the risk of Parkinson's disease was more than double among men who were deployed during the Vietnam War, but not among men who served at the time but were not deployed. Service during the Korean conflict, regardless of whether a man or a woman was deployed, was not associated with an increased risk of Parkinson Disease, she added. Overall, men who were deployed to one or more wars were 80 percent more likely to develop Parkinson's Disease than those who never served.

Neurology Today: Volume 5(6) June 2005 p 48

Military Deployment may raise risk of Parkinson Disease

Laino, Charlene

Research and other evidence linking Parkinson's disease with the 1991 Gulf War

Inhibitors of acetylcholinesterase

Sarin is an organophosphate nerve agent, which has a similar structure and biological activity to some commonly used organophosphate insecticides. They both react irreversibly with the enzyme acetylcholinesterase, which is responsible for inactivating acetylcholine at neuromuscular junctions. They are both inhibitors of acetylcholinesterase. Pyridostigmine bromide is a carbamate, which like organophosphates are also inhibitors of acetylcholinesterase.

Possibility of a link between Parkinson's disease and Pyridostigmine bromide

The RAND Corporation's "A Review of the Scientific Literature as Pertains to Gulf War Illnesses, Volume II: Pyridostigmine bromide" discusses the possibility of a link between Parkinson's disease and Pyridostigmine bromide. The Lloyd Inquiry notes that "The RAND report by Dr Golomb was severely criticised in an MOD 'Appraisal' by the Gulf Veterans' Illnesses Unit, published in April 2000. The Inquiry was supplied with this appraisal and accepted some of the criticisms made. Several criticisms, however, were concerned with points of detail, which, while not unimportant, were insufficient to deflect the spotlight away from Pyridostigmine bromide. In the opinion of the Inquiry the finger of suspicion pointing to a role for Pyridostigmine bromide (NAPS) in the pathogenesis of illness in GWVs remains in place." (http://www.lloydgwii.com/admin/ManagedFiles/4/LloydReport.pdf)

UK and US Chemical War Research

The US Government's commitment to research into Parkinson's disease is apparent. *"The Department of Veterans Affairs (VA) has taken a major step toward improving care and pursuing a cure for Parkinson's disease by creating six new centers specializing in research, education and clinical care and committing more than $30 million to support the centers over the next four years."* CNN Washington, DC VA Establishes

Six Parkinson's Disease Centers. The report further adds that *" the new centers represent the second substantial VA initiative regarding Parkinson's disease in two years. In 1999, VA and the National Parkinson Foundation, Inc (NPF) signed an agreement to establish the NPF-VA alliance to cure Parkinson's disease."* Some veterans view this spending as tantamount to an admission that a link exists between Gulf War Syndrome and Parkinson's disease; perhaps that Gulf War Syndrome is a form of Parkinson's disease.

The US Government is aware of a link between "toxins" ie Sarin and Parkinson's disease. In March 2004, both the Associated Press and Reuters News Service reported that the Pentagon had granted $240,000 to a Swedish team for stem-cell research. Lund University in Sweden said the US DOD was supporting the study concerning Parkinson's disease "because the findings could be used to treat similar neurological illness caused by battlefield toxins". The work of the UK's Chemical Defence Establishment into Parkinson's disease was praised by the local Member of Parliament on his website.

Suspicions in the US of an increased risk of developing Parkinson's disease
(a) "Beatrice Golomb of the University of California-San Diego suspects that Persian Gulf War veterans also might have an increased risk of developing Parkinson's disease" - "Already, Golomb says, she has treated Gulf War veterans diagnosed with Parkinson's in their 40s."
(www.veteransforpeace.org/Studies_tie_Lou_092303.htm)
(b) An extract from an email from Dr Haley on the 22nd July 2004 says "We too have seen a number of fairly young 1991 Gulf War veterans with tremors that began right after the war and a few with frank Parkinson's disease. As a result the US Veterans' Agency Research Advisory Committee on Gulf War Illness is issuing a report with a strong recommendation for a national Parkinson's disease survey of gulf and non deployed personnel from the gulf war era"

Parkinsonism following Pyridostigmine bromide
"The clinical relevance of an effect of acetylcholinesterase on dopamine is suggested by reports of development and of exacerbation of parkinsonism (a condition of reduced motor movement combined with tremor that results from problems in the dopamine-rich nigrostriatal system in the brain (Wilson, Braunwald, et al., 1991)), following Pyridostigmine bromide (Iwasaki, Wakata, et al., 1988) (Kao, Kwan, et al., 1993) ".

Genetic susceptibility in individuals who succumb to Gulf War Illness and Parkinson's disease.
"Compared with a control sample, 26 affected veterans had much lower levels of the enzymes paraoxonase (PON1) and butyrylcholinesterase (BChE), which are responsible for inactivating organophosphates, and the levels were particularly low in those with syndrome 2. Mutation of the PON1 gene is also associated with the development of Parkinson's disease (I. Kondo & M. Yamamoto, Brain Research, 806, 271–273; 1998)."

Summary

Parkinson's disease can be induced quickly and irreversibly by the chemical mptp. There are a number of pieces of published research which suggest a link between Parkinson's disease and the 1991 Gulf War. Anecdotal evidence of eminent US doctors over early onset sufferers is quantified by the numbers presented in this testimony. Some of the statistics on sufferers shown are higher than expected. The numbers shown are likely to be small in comparison with the actuality.

Some medical researchers suggest that a silent majority of veterans who are ill have still to come forward. I want to work. I don't like the idea of claiming a War Pension but realise I may have no option. I would rather be working towards building my own business than writing testimony to the US Congress. I want to enjoy myself while I can.

The hypothesis that my Parkinson's disease was caused, or triggered, by toxins, possibly Pyridostigmine bromide, during the 1991 Gulf War is plausible.

Recommendation

I would simply support the recommendation made by the US Veterans' Agency Research Advisory Committee on Gulf War Illness last year that an epidemiological study should be conducted to establish whether or not Gulf War Veterans are suffering higher incidences and prevalence of Parkinson's disease than other populations.

Carl Musgrove
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Wiltshire SN10 3AJ
UK

[redacted]

[redacted]

Websites:-
http://mysite.wanadoo-members.co.uk/coalitionforcegwi
http://mysite.wanadoo-members.co.uk/militaryparkinsons

Appendix 1. 1991 Era Veterans suffering from Parkinson's disease known, or believed, to exist\by Carl Musgrove.

Nickname	Country	County / State	Service	Age	Age at diagnosis	Age at first symptom	GWV	NAPs	Gulf / Iraq War Experience / Remarks	1st symptom
GulfVet	US	NY	USAF	36	33	23	Yes	Yes	Controller C130 Command Post	Tremor in foot
CH-46CrewChief	US		USMC	36	34	24	Yes	No	Amphib asslt ship - many inland missions	Left arm had a slight tremor
GunnerySgt	US	Arkansas	USMC	52			Yes		Deceased 2000	
Seabee Two	US		USN				Yes			
Seabee Three	US		USN				Yes			
Seabee One	US	Alabama	USN	69	65	56	Yes	Yes	Saudi Arabia	Muscle stiffness
Dominicanosam	US	Florida					Yes		Active duty	
13FOXCOLT	US	Virginia					Yes			
UTPatientOne	US	Texas ?					Yes			
UTPatientTwo	US	Texas ?					Yes			

Testimony of Carl James Musgrove – Parkinson's disease dated 15/11/2005

Nickname	Country	County / State	Service	Age	Age at diagnosis	Age at first symptom	GWV	NAPs	Gulf / Iraq War Experience / Remarks	1st symptom
UTPatientThree	US	Texas ?					Yes			
UCPatientOne	US	California ?					Yes		Mid forties	
UCPatientTwo	US	California ?					Yes		Mid forties	
UCPatientThree	US	California ?					Yes		Mid forties	
SeattlePatientOne	US	Seattle ?					Yes			
SeattlePatientTwo	US	Seattle ?					Yes			
SeattlePatientThree	US	Seattle ?					Yes			
Blackjack	US	Florida		44	43	31	Yes	Yes		Osteosarcoma
Candy	US						Yes			
DrMom	US						Yes			
Anonymous soldier*	US		Army				No		2003 Iraq War	
Founderyp	US	New Mexico	USAF	37	33	30	No		Signals intelligence Analyst	Lower back pain / eye difficulties
Steve	US		Army	37	37				Active duty	
Programmer	US		USAF	39	36	35				Unintentional pressing computer keys
Dan	US		USAF	36	35	34			Active duty	
LawOfficer	US		USN						Based in Italy / KTO?	
Spinning Goddess	US		USN	46	45	34		No	Intelligence Unit Japan	Numb face and arm
Author	UK	Wiltshire	Army	46	41	32	Yes	Yes	Riyadh and Tallil	Trailing Arm
Guardsman	UK	Norfolk	Army	54	48	40	Yes	Yes	UK POW Force	ME
Engineer	UK	Norfolk	RAF	50	45	36	Yes	Yes		
War Pensioner One	UK						Yes			
Journalist	UK			58	46	44	Yes			Hand cramps
Highlander	UK	Fife	Army	49	46	39	No			Trailing Arm
Rockape	UK	Cornwall	RAF	49			No			
AdminOfficer	UK	Norfolk	RAF	60	54		No			
FieldGunSubmariner	UK	Dorset	RN	58	50	47	No			
CommsOffr	UK	Essex	Army	49	46					
AirViceMarshal	UK		RAF							
4SquadronPilot	UK	Dorset	RAF							
FOS	UK		RN						Deceased few years ago aged approx 60 years	
Canadian One	Canada						Yes			
Richard	Canada									
Aussie One	Australia		Army				Yes		Serving 1st Br Armd Div	
Aussie Two	Australia		Army				Yes		Serving 1st Br Armd Div	
Aussie Three	Australia		Army				Yes		Serving 1st Br Armd Div	

TESTIMONY TO

Congressman Christopher Shays and House Government Reform Committee- National Security, Emerging Threats and International Relations
Subcommittee-

VA's Implementation of the "Persian Gulf War Veterans Act of 1998"

November 15, 2005

Submitted by:

Denise Nichols, Vice-Chairperson National Vietnam and Gulf War Veterans Coalition, Veteran Gulf War, MS[redacted]

Good day, Chairman Shays, Committee members, and members of the audience today. I am Denise Nichols, Vice Chairperson of the National Vietnam and Gulf War Veterans Coalition, President of the Desert Storm Veterans of the Rocky Mountains, a Gulf War Veteran, Major,USAFR(ret), Retired Nurse, MSN and Flight Nurse. I came forward when I realized I was sick after returning from Saudi in 1991. I have been actively in attendance and in testimony at every hearing on the hill and elsewhere since 1994.

Gulf war veterans who are ill have been abandoned and hundreds if not thousands of hours of investigative hearings since 1993 have been conducted without resolution of the problems. Today the gulf war veterans are still seeking resolution and we are getting sicker while tens of thousands of our peers are now
dead and buried. We came forward requesting: prompt and effective physiological assessments and subsequently relevant medical care to cure or alleviate medical problems and to obtain compensation and pension support. Obtaining compensation has improved somewhat at least by the number of claims approved. The process of applying for a VA compensation is without a doubt a nightmare and continual war for each veteran. This system should be viewed as a national disgrace and a dishonor to our ill veterans. The sick and medically incapacitated veteran has to somehow get through each step in the process while requesting but not obtaining help.

Thousands of gulf war veterans are still coming forward into the claims process having gone as long as they can in denial and now accepting their illnesses and seeking answers, we ask that all deadlines for the registry, presumption of service connection, spouse and child registry, and all previous legislated efforts be extended indefinitely or at least until 2012. A streamlined fast claims process for gulf war veterans is desperately requested as part of this legislative package.

There is not an effective advocacy program for each veteran. VSO service officers have variable talents and abilities, some are excellent and severely overworked, while others are less qualified and knowledgeable. The Rating officials run the whole range of being

informed on gulf war illness to incapable and uncaring in attitude. Somehow, the care and respect and concern for each of our veterans for their best interest falls by the wayside.

The registry exams that were established by DOD and VA officials appears to have been set up to fail! By performing less than complete physicals and not being sure that each ill gulf war veteran was given the complete physical, the data would be screwed and the count of veterans suffering would never be accurate. Was this the DOD/VA plan to discredit the reality of the damage from the very beginning?

The registry exam was structured to be a three phase physical. It appears to me, a person with a great deal of medical experience and organizational abilities, that these registry exams were never meant to be completed for each soldier. Veterans enrolled in the registry exams hoping to get through the complete physical and diagnostic testing did not get the complete testing in all three phases, a check-off list was not provided nor guidance given by the DOD/VA to the soldier veteran. Those of us that were health care providers saw that this did not occur.

We trusted our leaders that the evaluation would document our medical problems with subsequent medical care provided based on a valid diagnosis or even ill defined illnesses, and the trust has been definitely broken. The system of exams was not universally applied or even structurally complete. With such a wide degree of compliance, the registry exams did not provide the testing the veteran deserved nor did it meet the need to provide data that could be utilized easily in assessing the overall problem. The problem was in the implementation of the plan. Either the coordinators and OIC headquarters were ill-informed, compromised, or totally incapable, incompetent, and criminally negligent in the performance of their duties.

We trusted that each ill veteran would get the complete list of tests so that a baseline of good medical data collection would happen that could be utilized in assessing a total group of patients that were exposed to hazardous substances. Then healthy individuals could also have tests that were needed for a healthy comparison group. The health care providers know also, that data collected on ill individuals should also involve a review of prewar tests that might be available in comparison to our post war data to see shifts that did occur in relation to such items as RBC counts and renal and liver blood results. If environmental NBC poisoning had occurred it would show up in these basis tests as subtle but significant changes. We saw that this type of indepth, thorough, and consistent reviews were not done.

Instead when we look back on the registry exam process, we saw from the initiation that some soldiers were sent through the full range of diagnostic testing, while others were not and that specific high level neurological and immunological tests were not ordered. We see a glaring deficiency that no attempt was done to identify units and geographical locations that would document exposure levels and vaccination records.

When this surfaced as a problem, the CDC should have been activated to do the through investigative medical work that would be needed. Full units of affected soldiers should have gone thru the process and those that said they were not affected should have had the same baseline workup done and soldiers in those units that had not deployed should have also been tested, therefore you would have started with a complete array of data.

One has to wonder whether the DOD/VA wanted an organized and through approach to the investigation of gulf war illness from the beginning. How the registry data has been conducted lends one to consider that this was a selective, segmented sampling similar to what was done in the Tuskegee Syphilis Study with no intention to quantify the type and extent of the medical problems.

The registry program has not done what it should have done. The program needs to be extended legislatively past 2006. The program of the registry should be fine tuned to look at body systems that we now know to have been affected to include neurological high level scans, immune, viral, endocrinology, renal, liver, and hematological blood work. Each and every affected veteran should have access to this complete diagnostic workup at sites in each state or at least regionally,even if fee basis or champVA needs to be utilized. When this is done, we need to have the data collected and organized by unit and geographical war time location. This should be done with HHS and through major clinical university hospitals and the VA and DOD should be forced to relinquish this program. They have failed and lost the trust that would be needed to administer the registry program.

We need the best and brightest medical clinical investigative workers involved now. Veterans need to be listened to and their suggestions for improvement need to be highlighted. Legislatively it would be appropriate to have veterans and veterans with health care expertise working on a commission to direct the revamped Registry Program. This commission could have members from CDC, NIH, and Medical universities expert fields. A 3 month time period would be sufficient to meet and set up the inclusive diagnostic tests that would be included. Then the plan of how to coordinate with civilian institutions could be done within the following month. The institutions would need to be briefed and resources made available. This process would be able to be dovetailed into the Nation's Medical Emergency Response program and would become a foundation that would result in our country being better prepared for chemical, biological, nuclear incidents in the future.

The subsequent medical care that the gulf war veterans have experienced within the VA and DOD system has been the worse possible. Fifteen years after Operation Desert Storm the physicians are not allowed to use all their expertise and medical investigative abilities to order the tests that are truly needed.
Medical providers at the VA have told those gulf war veterans that were also medical providers that their hands had been tied by policy. The attitude of the doctors has got to be corrected immediately. The doctors have dishonored again a group of veterans who were environmentally and medically poisoned.

Each veteran should have been and still must have testing for leischmanasis.
Please include this in any legislative package that comes forward.

Testing should also be legislated and done that includes DNA/RNA testing(Dr Howard Urnovitz and Dr Schott(Germany). These would show the true damage done to each veteran of the gulf war.

Again, I am asking that legislation occur that sets up a commission of veteran medical professionals and veterans that would be the commission that set us an operational plan to correct these problems. The system would have a headquarters and then regional and VA hospitals committees to handle veteran complaints that are related to medical care.

We requested research to help find answers and develop effective assessment and diagnosis and treatment techniques but instead we have been trapped by the Military Industrial Research Triangle. Money---Tax payer money was used to fund research that has never had all the findings published and unpublished for each federally funded research project reported and distributed to each doctor military, VA, and or civilian. Independent research on gulf war illness has also not gained widespread distribution. Medical Associations and veteran and civilian doctors need an annual education on the topic of gulf war illness and they need a website and email network that has weekly updates and discussions.

Annual reports of research were not submitted to Congress as required by law since 2003. Accountability standards demand legal action to be taken for the lack of follow through on this legal requirement. Is the system, immune to prosecution? Has oversight failed? Whatever the reason, the lack of annual reports has hampered doctors in the past two years to be updated on the latest findings and this impacts directly on the veterans' care. At this point after the war, one would think that a pathological lab for storing and maintaining gulf war veterans brains donated postmortem would have been established. Pathological postmortem research has been zero and this is criminal because within that area of research a great deal of answers could be found.

One would also think that a lab to store blood samples for both those living and dead identified by unit and location should have been established to improve the resources available for researchers.

It is interesting, to compare last year's testimony with what has happened a year later. It took a full year to get a manager for the research portfolio for gulf war illness. This demonstrated the foot dragging slow response evident from the VA at every level. This is quite simply an example of the
unacceptable response rate.

The research was purposely slanted by those personnel in control of the process within DOD and VA to deliberately and willfully avoid the truth at all costs or to direct it to psychosomatic, somatization, and stress. It has been exceedingly impossible to obtain funding and get grants approved that were actually viable with applicable outcomes to

enhance medical care. Dr Hailey can attest to that fact. Other research was not performed correctly as Dr Nicholson can attest to that and consequently Mycoplasma infections have been taken off the table. DU research has been completed controlled and misdirected on purpose so that our government can continue to use this illegal weapon as specified in the infamous March 1991 Los Alamos memorandum while ignoring known and anticipated adverse health and environmental effects.

Research on the death data has not been done. Again we call on legislative remedy. The deaths of veterans should be matched by Social Security number for the most complete accounting. The information that needs to be released includes name, unit, location in theater, cause of death, and contributing causes or diagnoses. In this way we not only open up the field to research projects but also a means to honor those who have died.

If money is allocated and appropriated to either DOD or NIH oversight and public availability of any research grants funded and results obtained should be spelled out with legislation. I would think it would also be appropriate to have a separate commission that includes at least 5-6 veteran advocates should be also legislated similar to the VA-RAC. This would facilitate the guidance and feed in to the focus of the research and applicability to diagnosis, care, and treatment.

I definitely feel that money for research into the gulf war illness should also be allocated and appropriated for NIH.

Researchers and physicians need legislated protection. The efforts of many researchers and physicians have been sabotaged and their careers threatened.
Examples include Dr Hymen, Dr Baumzweiger, Dr Moss, Dr Andras Koryeni-Both, Dr Lu Fang, Dr Durakovic, and Dr Nicholson. Any threatening of doctors and researchers must be stopped now.

The need for Centers of Excellence for Gulf War Illness Research and Care still continues. WE have been promised hospital centers before and this has not been fully implemented. We need these hospitals to be at the regional levels at least and not centered entirely on the East Coast or West Coast. The replication of Dr Hailey's study could have been conducted with MRI-RS availability at multiple sites throughout the country.

The missing link that is glaringly apparent is the lack of application of research (both federal and independent) in a timely rapid manner to diagnosis, care, treatment, and claims applicability. An example is the Hypercoagulation Study done by Hemex Labs(DR David Berg) in Phoenix, AZ. This study was an independent study that showed that Veterans of the gulf war had hypercoagulation that could impact circulation to all body organs including brain, cardiac, liver and renal. The study was published in November 2000 in the Journal of Blood Coagulation and Fibrinolysis. When I took this study in to my VA primary care physician with the name and phone numbers of Researchers and Doctors she scoffed it off. This study had included my blood sample

and my results were abnormal. I wanted treatment and I wanted the findings to be disseminated so other gulf war veterans could benefit from this study and possibly a larger study of this finding could be performed. Instead no attention was paid and my primary physician offered me a consult to psychiatric. I find this particularly offensive, when I am aware that the editor of the journal that published that peer reviewed research was the current chief of Laboratory Services at the VA Denver Hospital.

This action by this primary doctor was totally inappropriate. This occurrence definitely showed me I should have no trust or confidence in the VA paying attention to physiological findings and providing me the best care possible. I personally feel that we should not have to go to the VA hospital but that we should have fee basis cards issued to us or that Champ VA that is available for spouses should be the standard for the gulf war veterans.

Each Gulf War Veteran should be getting SPECT Scans, PET Scans, MRI-RS, viral testing, immunological testing, hypercoagulation testing, heavy metal testing, Blood testing on regular basis for renal, thyroid, parathyroid, hormonal and endocrinology, cardiac, and liver function, testing for MS, parkinsons disease, visual testing, audiological testing, dental health exams, and an active cancer detection program (to include brain).

If this was done and treatment initiated we would have not only better diagnosis and medical care, we would have the research coming directly from each gulf war veteran's own body. As I have said since 1992, the proof is in our bodies if they would just do the right testing.

Why do they continue to refuse us gulf war veterans. Is it simply a cost factor and that we are disposable items of use, or is this willful misconduct and omission of care, by the DOD and VA? There should be no excuse for letting this malpractice and illegal hiding of the truth to continue. WE seek now effective legislation to mandate these diagnostic tests.

Why has the Association of Environmental Care Medicine's offer in 1991 to train and educate the VA physicians been turned down? Their testing and treatment modalities should be instituted now without further delay. Use their testing and treatment outcomes and conduct a research project if necessary. So far their principles and treatments are about the only thing out in the field ready to be implemented to help alleviate the gulf war veterans suffering. If we could do this, there is a great probability that many thousands of gulf war veterans could be helped to stabilize, neurocognitive function improved, livelihoods saved, and quality of life improved. Unemployment for this group of veterans would potentially be decreased.

For the gulf war illnesses to be truthfully handled the personnel that have been directors for the government in the DOD and the VA need to be removed from their jobs and never allowed any involvement whatsoever. We tried over and over again to rehabilitate them for the good of the system and to give them an opportunity to rebuild the system they

broke and the trust that they have lost. They had the opportunity and they forfeited it by their mismanagement and obstructionist patterns of operation.

The facts speak for themselves that the three monkey syndrome is fully operational. Treatment and care ends up being end stage treatment when the causative factors and effects of delay in care is the end result. Sick veterans then get cardiac surgery, dialysis, etc when we can prove that our organs are dying in the final onslaught that started with our exposures in wartime environment. We only get the medical care we earned in the VA if we have won the whole war consisting of many battles to win a prompt and effective diagnosis, medical care, and compensation.

Today this congressional hearing is focused on the RAC. Will sir, I see a system that is broken entirely from start to finish. I see a few survivors in the room today and yet thousands are still there from the start line to the finish line all scattered out and barely functioning.

The problem starts and ends with accountability and responsibility!

When will our DOD leaders who took us into battle step forward to speak the truth and fix this mess? Who will coordinate and ensure each sick or injured veteran receives the help they were promised for serving our nation. Who will facilitate the complex paperwork or eliminate this unattainable battle required to obtain compensation and medical care? Who will help the veterans of the first Gulf War who are crawling to the door of the VA for help?

Who will get them a complete and through physical with all the high level testing re MRI-RS, Spect Scans, Pet Scans, blood work to include viral, coagulation workup, heavy metal testing, hormonal, endocrine, immunological work ups in order that we can get some definitive treatment. When will they stand up to treat each of these disorders? You see when you hit the Neurological and Immune systems of the body it is a cascade effect to each organ in the body.
The powers that be here on the hill removed the very wording we needed re Neurological and immunological disorders from our last bill and law. (original sponsor Representative Manzullo) This was done deliberately and purposefully to continue to hide the true damage and implications of our multiple exposures.

Who among you will stand up to correct the past laws and lead us out of this wilderness?

Who among you will make order of the chaos that has stemmed from the DOD actions and decisions and that VA was complicit in by derogation of duty?

We need an operational plan that eliminates the delay, confusion, and denial.
Gulf war veterans should have help and effective advocacy within the system not from without the system. Please I beg you do not continue to dishonor your veterans of Operation Desert Storm and other wars and conflicts. You dishonor us by the collusion and the closed under table secretive plans that have and continue to be laid by each

segment of the government. WE believed in our government, we went forth to war and came home damaged. WE have approached each committee, each congressman, each senator, each administrative, DOD, VA, IOM, CDC committee with honesty and a willingness to help and to resolve the problems and optimize medical care. WE are not your enemies as USMC Major Randy Hebert testified to you years ago.

WE need a final resolution and this will only come when an admission of what actually happened to us is acknowledged and revealed from sea to shining sea.
When will elected men and women all unite to tell the truth!

Make those that were part of the denial and delay accountable by bringing forward all documents and telling us all what they destroyed and hid. Provide immunity and protection for DOD and VA officials that come forward to expose the truth.

DOD officials must admit liability for all the exposures because until they tell the truth and accept responsibility our very health care is limited to terminal care.

WE need the honest brokers in the VA to do the Right thing and tell the Doctors this is not secret any more. Pull out all the stops and roadblocks and let the doctors do all they can to get us legitimate answers and effective medical care.

WE need each veteran of the gulf war assisted to the utmost degree with their claim. We need assistance in filing those claims because we have been neurologically damaged. This is like an alzheimers patient trying gallantly to explain, document, do paperwork to get the financial and health care assistance that he needs. Do you understand the desperate dilemma that you have placed on each of the veterans and their families? Do you realize truly how each of these veterans and their families were abandoned?

Questions I leave the committee with include:

Why have researchers been discredited and their careers threatened?

Why has Dr Durakovic, a highly qualified physician and researcher who was at Army Medical Command Headquarters at CENTCOM in theater been discredited? Why was every urine sample he sent in lost?

Why is the Army and DOD who has been obstructing the truth now being given research funding? Is this not like the fox guarding the henhouse?

Why did the VA contract with the IOM in a way that limited them to strictly a literature review of published peer review articles? Why wasn't the IOM given full access to all unpublished research by the Army, other services, and agencies on sarin, depleted uranium, and anthrax vaccines? These unpublished and probable classified research results would provide the full scope of scientific knowledge on the multiple agents of exposures. Was this all guided by administrative policy to not Deal with the whole truth and all the facts that science could provide?

Why are we not investigating how the after battle assessment of casualties was distort from the beginning? Why was this assessment guided by the OMB report after the war? Why did the PAC bring in Risk Management as a full topic of discussion at one of their earliest meetings held in DC? Has the full battle assessment of ill casualties been distorted since shortly after the cease fire? Are DOD and VA officials that have led the effort on gulf war illness been protected since the initiation by the Administration by White House Policy Directives? Is it time for the White House to change policy on Gulf War Illness?

Gulf War Veterans call on the President and the White House to change the policy and plan on Gulf War Illness in order to be able to truly address the needs of the Gulf War Veterans who are ill with truth and an operational plan that acknowledges the truth and provides actions that will resolve this 14 year history of disgraceful treatment of gulf war veterans.

Please recognize that the time for delay, denial, confusion, and distortion must end now. This nation is currently at war and the history of the results of earlier policy on gulf war illness wounds our nation's efforts in regards to ability to recruit and to provide for Security, Preparedness and Response in Medical Care from terrorist NBC attacks at home and abroad.

Testimony To

Congressman Christopher Shays and House Government Reform Committee on National Security, Emerging Threats and International Relations Subcommittee

VA's Implementation of the " Persian Gulf War Veterans Act of 1998 "

November 15, 2005

Submitted by:

Edward J. Bryan

I am SSG. Edward J. Bryan served in operation desert / storm for 7 months in theater. My duty assignment was loading and off loading ships with the 1173rd TTU unit at the port of Dammam. In civilian life I was a firefighter in Medford, Massachusetts until I was retired medically in January of 2000. I initially sought care in theater in August of 1991 for mosquitoes, sand fleas bites, dehydration, headaches and diarrhea. Upon my return stateside, I went to the VA in November of 1991, at that time I was seen by neurology and gastrology specialist, VA saw me at intervals every 4-6 months for follow-ups. I did the VA registry when initiated in 1993. I went through all 3 phases of the registry exams. It was very difficult to get the VA to complete the 3 phases. I submitted my claim in 1993 for gulf war illness, after 4 attempts I was finally rated at 100% for headaches, GI, carbon monoxide poisoning of the brain, nerves
(anxiety) somatoform, and blood
(anemia) and unemployability.

Today I am submitting for the record, the report of the board of trustees of the American Medical Association (attachment 1). Dr. Kathleen Leisure Murray
(PA) initiated the resolution that initiated this report at the 1999 annual meeting. The report recommends that the AMA " monitor developments in the identification of possible gulf war illnesses and congressional initiatives related to the health of gulf war veterans and respond appropriate ".

Another resolution has to be presented to the American Medical Association in order for the AMA to consider more direct support in regards to clinical diagnosis and treatment for gulf war veterans.

The next attachment (2) is on suspicious shells found in southern Iraq, January 11, 2004, CNN. This is one of several news reports that highlights that our current troops of OIF may have had exposures to chemical nerve agents. I have met several of the returning OIF veterans that appear to have similar if not the same symptoms of gulf war illnesses. At this time we do not know how many or what percentages of these veterans will be battling the continuing saga of gulf war illnesses. It behooves the administration, DOD, VA and congress to finally addresses gulf war illnesses with truth and a plan of diagnosis

treatment and compensation in a manner that restores the soldier's and veteran's confidence in their government

That last attachment (3) is a news article on chemical weapons dumped in the Atlantic Ocean and Pacific Oceans November 1, 2005 by John Bull (the Newport news, VA) Daily Press via AP. This is again one of many articles that an individual can find relating to chemical or Depleted Uranium contamination stateside. Civilians around D/U and chemical factories also have experienced chemical poisoning from industries, agricultural spraying and even home contamination resulting in them having ill-defined syndromes. So the population that is effected by chemical and biological poisoning is a very large percentage of the population.

In addition since 9-11 the threat of terrorist attacks using NBC has been a paramount concern of our country. The people of the United States and our own security could benefit from the appropriate direction on research, diagnosis and treatment from gulf war ill defined conditions.

In conclusion, this committee has the oversight and responsibility to provide leadership and legislative corrective actions now. I sincerely hope that you see the total picture of a need for clear direction to address the needs of all citizens with chemical radiological and biological contamination/poisoning.

Sincerely

Edward J. Bryan

Disabled Gulf War Veteran
[redacted]
Malden, Ma. [redacted]
[redacted]

14 November 2005

Congressional Statement: Gulf War Illness: Denise A Leslie, US Navy Veteran

I served in the US Navy for 9 years. My last duty was served onboard the USS Yellowstone AD 41. Towards the end of my enlistment, I deployed with the USS Yellowstone AD 41 for my second Med Cruise, which historically became known as Desert Shield/Desert Storm. We ported in Jeddah, Saudi Arabia [approx 109 miles from the front line] for much of the deployment. We also made 2-3 week trips to Egypt and Turkey. It was during the deployment back to the states and the months to follow that initial symptoms were being realized.

I joined the US Navy in 1982. I was a thin but healthy 19 year old. Besides some female health issues, I had no other health concerns. I maintained my health status through most of my enlistment. My memory was exceptional. Friends, Family and shipmates, alike were often awe struck with the details I was able to store and recall at any time. My gait was flawless. I was rather a good recreational dancer since kindergarten. My vocabulary was rather large. I successfully was able to retain vocabulary derived from school, the Navy [acronyms and terms], as well as an intact biblical/sacred lexicon.

On the return deployment home from the Gulf, I became extremely sea sick. I had to be medicated. Shortly following that episode, I became extremely dehydrated and had to be hospitalized. Sea sickness or any type of motion sickness was not common with me. I would only experience a slight queasiness if the ship was riding through a storm or particularly rough seas. Though, the feeling was always short lived. Nevertheless, it was dismissed as a fluke. When home on leave, I was on a swing in a park with some friends. I was barely moving the swing ... and ended up sick. This time I dismissed it due to food that was consumed prior.

Meanwhile, issues with my memory began to surface. I was misplacing things, forgetting items on my to-do lists, forgetting names. I shared my concerns with my father. Shortly after, he contacted me and asked if I experienced other "symptoms". At the time, no others surfaced. It was at this time that my father told me of the Gulf War Registry and suggested that I look into it.

Following my discharge, I signed up for the Gulf War Registry with the VA Hospital, near my hometown, located in Butler PA. I also enrolled in College. It was at this time that the memory and gait/vertigo began to increase in manifestations and intensify in severity. I also began to have issues with fatigue. These would come and go, up to present. Issues with my cognition – specifically with my vocabulary began to surface.

In the next 6-8 years these symptoms would steadily increase and intensify. Memory – would manifest itself as misplacing my car in the parking lot or forgetting why I entered a room, to forgetting names, places and events. Cognition issues would manifest itself as an inability to finish sentences or misrepresenting intended words or phrases with opposite or nonsensical terms. Vertigo – would manifest by 24/7 sensations of one type of "movement" or another. Gait – is worse during morning and evening; but can manifest anytime through loss of balance or tripping sometimes in a intoxicated simulation.

At the time, I initially registered with VA, I was tested for memory. At that time, I was told that it "was stress". For the next decade or so, with every visit to the VA, I complained of

the memory problems. In reply, they were more concerned with my woman health issues. Once or twice doctors did a small test in their office; then quickly dismiss my concerns.

I recently returned back home after multiple relocations through the south. Being employed with insurance, I sought out "Civilian" doctors. Unfortunately, the neurologists assigned "did not apparently" find anything. I am in the process of seeking second opinion. As the first neurologist's office is known not to be genuine with the patient [the office has a long history of misdiagnoses and deception]. Upon retrieval of my records, I discovered 2 other issues with the MRI that was completed on my brain. I am not currently receiving any form of compensation. Most medical testing has been completed through privately obtained/Employer Sponsored Insurance and my out of pocket expense.

The employment I accepted was a newly created contractual position. Initially, responsibilities were low. Now, a year later, the position has been established and structured more with many added responsibilities. I make most of my deadlines, but work is becoming increasingly difficult. Fatigue is a major issue. I sleep/rest most weekends – to store up enough energy to make it through a 40 hour week. [I used to be able to work 60-80+ hour weeks to experience the same level of tiredness]. Memory is a constant hindrance. I misplace files, forget to-do tasks, fail to recall someone's name [right after it is stated], misc forgetfulness. I devote at least 2 -3 hours of my day **overcompensating** for my lack. I have several stickies all around my desk and computer. I had to design a Word document to help me track EVERYthing. Vertigo – often makes it difficult to work my day. Despite the nausea and other unpleasant sensations that are derived from the 'sensations', I push myself to make my time. I was once prescribed medication for my 'dizziness'; however, if I took it as prescribed, I would be taking it all the time. The Medication causes drowsiness which would increase the fatigue already experiencing.

Thus far, I manage. But if these symptoms continue to increase in manifestations as well as intensity and remain undiagnosed/untreated, I don't know how long I can keep up the schedule. I have always been a hard worker. Most may say I am or have been a workaholic. At 42 I should not experience this many health issues. Yet some have stated that they are due to my age. I was 28 when the first vertigo and memory issues initially surfaced. Could it then be age?

All I have ever requested from ANY medical professional, is to find out what is going on with my body/health and fix or alleviate it. My spirit is not ready to stop or be stopped from working. I gave the military a relatively healthy body. I served my country with pride and honor. I gave them well beyond 100% during my enlistment. Now, I wish to serve my faith and myself. It was placed on my heart a decade ago to help veterans. I have worked, almost as a hobby, on a program for veterans. With increasing health issues, it sickens me that I may not be able to realize those aspirations. Additionally, I am single. I am self reliant. I do not have someone else to fall back on ... or to "take care" of me [should these symptoms become disabling]. Thus, this is an important issue for me!!

On behalf of myself and others that I have learned, through the years, share my symptoms, **please help us**!! We volunteered to serve our country. We went willfully and without reserve. All we are now asking, is with the same lack of reserve – that the VA and/or other medical professionals listen to our health concerns. **If there is a cure – then cure us; if there is no cure – then find a treatment to alleviate our symptoms**. In any case, **to give compensation – where compensation is due**!!! I echo the feeling of most, that we are being

ignored. Something caused these symptoms. And that 'something' took place in connection with our tour of duty during the First Gulf War. We ask for **just respect** and **just action** to our claims.

Unlike other government officials, we did not shrug our responsibility to our country ... so why are our claims being shrugged off now.

I respectfully submit my statement to the Congressional Hearing on the Gulf War Syndrome. I certify that all statements are true and can be attested to.

You may contact me at [w] 1.800.453.9269 [redacted]

Thanks you, in advance, for your attention to this matter.

Respectfully,

Denise A. Leslie

INFORMATION PAPER

ADMINISTRATIVE AND INSTITUTIONAL BARRIERS TO PROMOTION OF PERSIAN GULF WAR RESEARCH INITIATIVES

This document with attachments is being provided by the Rhode Island Persian Gulf War Information and Relief Commission to the National Gulf War Resource Center to be submitted as background information to the Rep. Christopher Shays committee hearings on 15 Nov 05.

For ease of reading, the paper is presented in the following four major subsections.

I SUMMARY
II CONCLUSION
III CHRONOLOGY
IV ATTACHMENTS of PROPOSED RESEARCH PROJECTS

I SUMMARY

Our research initiatives, which include several discrete phases, have been submitted to both the DOD and VA, over the last three years, and are attached as appendices A-G. With some rare exceptions, as highlighted in BACKGROUND INFORMATION, below, the efforts of our ad hoc research group, appear to have met with entrenched bureaucracy or indifference within each agency. As a layman, my impression is that the systems are overburdened with administrative process and procedure, which have become ends unto themselves. In addition, the current review mechanisms appear to be unable to interject "human Intervention" into the process. For example, direct dialog between the project PI and the reviewer could easily prevent irreversible misinterpretations on the part of the reviewer, as well as develop a recognition that time is the critical factor. No agency we have dealt with has shown any recognition that real world, real time events are driving the need for research, and that the window of opportunity is fleeting. .

Another illustration of "systemic" problems is that while agencies such as the VA have published a Request for Proposal for Gulf War research, it is required that the Project Principal Investigator must be a VA employee. Typically the best qualified individual is already overloaded in their own day to day operations, so that finding that medical professional, ready to dedicate himself to another burden has not proven to be a realistic expectation. In essence there is not much incentive for a medical professional to devote the additional time and effort to prepare and submit a proposal.

While financial controls are at the heart of any successful operation, there must be knowledgeable management that is empowered to make critical decision, rather than to be driven by a set of arbitrary rules. As will be explained further below, there are numerous VA rules on funding research, which are based on specific dollar limits. What happens if the projected research costs truly exceed the artificial limit? Is one forced to conclude that the research isn't worthy of funding? In the engineering field, after a project is deemed important, a scope of work is first identified, and then the budget estimated. The process encountered with both organizations appears to first identify a "not to exceed" dollar amount, and then to fit the proposed project to the available dollars. One obvious consequence is that twenty million dollars can fund a large number of small projects, which may give the impression of great attention, while a larger number of potentially valuable projects may go unfunded. This is an area needing significant revision, to assure the true worth of proposals determines funding, and not artificial goals in numbers or dollars.

To emphasize the foregoing, it should be noted that around April 2004, six months after the Secretary of the VA announced the availability of twenty million dollars for gulf war research, only about $400,000 had been awarded. What isn't working?

II CONCLUSION

In our efforts to submit what we feel are viable gulf war research proposals to both DOD and the VA over the past three years, we have generally encountered an administrative, academic environment separated by a chasm, from the field of a soldier's suffering and sacrifice.

III CHRONOLOGY

A. Background on the initial organization and efforts of our ad hoc group

B. April 2003 Information briefing prepared for Senator Jack Reed

C. Chronology of events from April 2003 to September 2005

A. Background

In late 1997 I was contacted by one of my former officers, a Desert Storm veteran who had worked in the Kuwaiti medical community as a civilian after the war, and who was a doctoral candidate in Immunology. Concurrently I became a member of the newly established RI Persian Gulf War Information and Relief Commission. The commission's early work in getting RI ODS veterans get into the VA system for physicals immediately suggested that we have some preliminary discussions on forming an alliance between the VA, the RIPGWIRC, and Mr. Haines, the gulf war veteran. Two medical professionals at the Boston VA Medical Center were extremely helpful, and we began to develop a research document that would focus on studying blood samples from RI PGW veterans. Discussions on the hypothesis and study design were based on best available information on problems being encountered by PGW veterans, as well as first hand knowledge of some of the medical problems observed in Kuwait, following the war. Fortunately the VA physician also had extensive knowledge of the mid east.

From my layman's perspective, we were developing a research proposal including a study design, which basically hypothesized that the "Gulf War Syndrome", evidenced by many soldiers was in fact caused by either environmental exposure, or the numerous vaccinations received, or a combination of both. The scientists felt that these exposures had caused a TH1/TH2 cytokine shift, which could be detected through testing of blood samples. Unfortunately, to underscore one of the points raised in the Summary above, an internal re-organization in the Boston VAMC, resulted in the physician assuming a very significant expansion of his duties, with the result that he had to withdraw from the project. I spoke with several other VA physicians, who expressed encouragement and interest in the proposal, but none was able to take on any additional work load.

After spending several months in an unsuccessful search for a VA physician interested and able to pick up the additional workload, it was reluctantly concluded that working through the VA as the primary source, with a VA physician was not doable. It was at this time in the fall of 2002, that we identified Dr. Paul H. Levine of George Washington University as an individual with impeccable credentials, who had also conducted some gulf war research. I arranged to visit him to ask if he would take over the project as PI. The next portion of the chronology is best described by the following briefing I prepared for Senator Jack Reed. (See next page)

B. INFORMATION BRIEFING FOR SENATOR JACK REED 14 APRIL 03

SUMMARY OF EVENTS RELATING TO GULF WAR RESEARCH INITIATIVES CO-SPONSORED BY GEORGE WASHINGTON UNIVERSITY, THE RHODE ISLAND PERSIAN GULF WAR INFORMATION AND RELIEF COMMISSION, AND PARTICATING VA MEDICAL CENTERS

BY

BG (RET) RICHARD J. VALENTE
CHAIRMAN, RIPGWIRC

SUMMARY OF KEY EVENTS OCT 2002-APRIL 2003

Our core group has been working for the past few years in preparing a research proposal that would be based on detailed analysis of serum from gulf war veterans. Over that time, the proposal has gone through an evolution of both specific hypothesis and lab science, to arrive at the current document. The basic hypothesis is that some unknown exposure, either the regimen of vaccines administered for overseas deployment, or the vaccines coupled with unknown exposures or stresses, resulted in an imbalance in the immune system responsiveness, as evidenced by a Th1 Th2 cytokine shift.

It was felt that a validation of this hypothesis could prove of inestimable value in addressing treatment protocols, or possible re-structuring the medical portions of mobilizations, with regard to administration of vaccines.

In Oct of 2002, I visited Dr Paul Levine of George Washington University, to ask him to assume the role of Primary Investigator for this project. Although the lessons learned would have application across the entire force structure, the project itself was focused on utilizing RI veterans of the 1990-1991 Gulf War, a key interest of the Commission. At the beginning of that meeting, Dr. Levine and his staff presented findings of a study of gulf war veterans he had recently completed, but not yet published. In essence his two study groups, one of inoculated veterans who had deployed to the gulf, and another group who had been inoculated, but who had not deployed, showed a high degree of correlation of so called "gulf war symptoms"

In light of that preliminary data, and with the likely deployment of soldiers to South West Asia again in the near future, we agreed to redesign the scope of the proposal. This would be accomplished by expanding it to include a prospective study of probable new gulf veterans, as well as the original retrospective study of ODS veterans, and comparing results for both groups, to include appropriate control groups..

In order to accomplish the prospective study above, it was decided that three blood samples could bracket key points in the soldiers' experience.

- First, a base line blood sample taken before any overseas inoculations
- secondly a blood sample at the mobilization station, after receipt of the overseas inoculations
- Thirdly a blood sample after return from the area of operations.

Dr Levine's group at GWU literally spent hundreds of hours to prepare the first draft of the proposal. The proposal was briefed to Sen. Reed in early December, 2002, seeking his assistance in securing expedited funding for the proposed study. The obvious concern was that world events would probably soon result in the very deployment activities we wanted to access. It was also very obvious that following usual protocols for requesting research funding would take time we didn't have.

This key issue of time criticality, which first led us to seek help in expediting the approval process for what was fast becoming a "target of opportunity", appears to be a concept either never grasped, or shared by agents of both the VA and DOD, that we dealt with over the next two years.

A military staffer from Senator Reed's Washington office was assigned as action officer. Within a few weeks he had identified a significant source of discretionary funding in the FY 03 budget, available within the Office of the Assistant Secretary of Defense for Health Affairs. (OSDHA) The proposal was forwarded to that office, with a request for funding by Senator Reed.

Interesting enough, about early February 2003, we were made aware that DOD had in fact been mandated by Congress as early as FY 1998 (PL 105-85) to take steps to avoid a future gulf war problem. This was to be accomplished among other things by a base line blood sample of the soldiers. We believe that several of the DOD personnel who had become aware of our proposal, would probably by virtue of their positions, have been well aware of the Congressional mandate.

At about the same time, with the mobilizations moving into high gear, a new policy for force health protection was articulated in the media by DOD. It appeared to amount to a simple questionnaire which each soldier would complete. It further appeared that, in essence, it would require the deploying soldier to self indict himself in order not to deploy. Given the dedication and high caliber of today's soldiers, that is not a realistic expectation. Fortunately, it is the rare soldier who would voluntarily remove himself from his unit during mobilization and let his comrades down. One must question the design of this "new" protection tool, which appears to take full advantage of that truism.

During the period from early January when the request was made, and until mid April, Senator Reed's office followed up several times, including a letter signed by Senator Reed, and hand carried to the Office of The Assistant Secretary of Defense for Health Affairs.
The usual response was that OSDHA was formulating a response, and that delaying action continued until Dr Levine was notified by a ***member of the media*** about 15 Apr 03, that The ASDHA had basically indicated to them that the project had been denied funding because there was an administrative review process, which was not followed, but we were encouraged to follow the process and resubmit the proposal.
It appears that at no time was there any recognition of the time sensitive nature of the proposal vis-à-vis the mobilizations.

In spite of Dr Levine's professional reputation and that of George Washington University, there was never one communication from the ASD's office to Dr Levine, providing any comments or guidance, on what we feel should have been a subject of deep mutual concern. Finally, very unprofessionally, Dr. Levine learned of the OSDHA decision from the media.

It should be pointed out that from early February on, members of our group received several calls from the media (National Public Radio, The Washington Bureau of the Kansas City Star, John Ward of the Washington Times), regarding the apparent DOD failure to satisfy the congressional mandate. I indicated to them that we currently had a proposal at DOD for funding, that we were strong proponents for. Our position was that we also believed that it fully met the congressional mandate. However, while we were basically aware of the issue, we did not view offering negative comments directed at DOD as being productive to our effort. I did point out there were several agencies in the DC area, such as the National Gulf War Resource Center, who were very conversant with the issue, and prepared to offer comments.

We were also contacted by Rep Christopher Shays Sub Committee on National Security, asking us to testify on 25 Mar 03, on the apparent failure of DOD to comply with the congressional mandate. After a lengthy discussion, I again declined to offer negative comments on DOD, but offered to discuss our proposal, and why we felt it was a perfect fit to the congressional mandate. However the focus of the hearings were on the failure of DOD, and they respected our position of not wanting to be drawn into that issue.

During this entire time, the only statements made by our group, myself included, focused on the fact that we had a research proposal at DOD, and were seeking funding for the project that we felt was more relevant than ever. We all assiduously avoided making any negative comments about the actions of DOD officials, despite our personal feelings. Our self-imposed goal was to remain professional and to continue to advocate for the project we felt so strongly about. In fact this project has been prepared by a group of professional volunteers, consuming literally thousands of man-hours to date (Oct 05).

THE FUTURE

At present, (April 2003), we have missed the base line blood sample, as well as the post vaccination blood sample. However, during this whole process we learned, and DOD has since stated, that they have a repository of every blood sample ever drawn from a soldier for the required HIV screening. So, assuming a bonafid research project could access those samples the baseline sample is still viable. Obviously we haven't as yet missed the third sample, i.e., the demobilization blood sample, (which we obviously have as or 2005). Dr Levine feels there is still much that can and should be learned scientifically from these two samples.

Events may also see the mobilization of additional Reserve Component soldiers for the rebuilding efforts in Iraq, and it was clearly shown that some of the follow on soldiers in the 1991 Gulf War suffered at a greater rate than some of the combatants.

CONCLUSION

The project is still viable with two sampling points, ***and because it also includes the establishment of a blood sample repository, it offers future researchers the option of studying samples that would not otherwise exist.***

RECOMMENDATIONS

Every effort should be made to secure funding and approval to permit this proposal to move forward without any further delay.

END OF APRIL 2003 BRIEFING PAPER, ANNOTATED OCT 05

SEE NEXT PAGE FOR SECTION C.
CONTINUATION OF CHRONOLOGY 2003-2005

C. CHRONOLOGY 2003-2005

Following the rejection of funding in April 2003, Dr Levine had some discussions with DOD officials who encouraged our group to submit the proposal following DOD guidelines. After discussion, it was agreed that the study as originally proposed, i.e., to obtain blood samples that bracketed pre-mobilization, mobilization, and return from overseas, was no longer valid. Although we had missed the second sampling after inoculations, it was felt that with appropriate control groups, and again including ODS veterans, laboratory comparisons of the samples from various groups could still produce viable results. One group was especially enticing, a unit from RI that prepared for overseas movement, but who did not deploy. Theirs would provide a look at inoculated soldiers minus the theater environmental exposure. Much additional work was done redesigning and rewriting the study to reflect the changed real world conditions.

The next event illustrated that not all bureaucratic process is the purview of government. In clearing all administrative requirements at GWU, the electronic document was submitted exactly on minute (60 seconds) past the 5:00 PM deadline for DOD submissions. Unfortunately, rules again prevailed, regardless of the potential importance of the study to Force Health Protection, and the one minute late filing caused the proposal to be ineligible for consideration for another year!

In yet another attempt to salvage the project, it was about mid summer when the VA Secretary's prior announcement of twenty million dollars in gulf war research funds was identified. The director of R&D at the Providence VAMC, was contacted, and we subsequently received the utmost cooperation and assistance, including a VA PI, from this group of extremely dedicated .professionals. With assistance in following VA protocols, we submitted a six page Letter of Intent in August 2003. Despite numerous follow up calls by the Providence R&D office with the R&D headquarters in Washington, no answer was forthcoming. Finally in December 03 we were asked to resubmit another copy, and in early January were informed that the proposed cost was too high.

We then redrafted the LOI to a budget which fit the pre-set VA R&D project amount of $150,000 per year. In so doing the proposal was basically re-focused on establishing a repository for the blood samples, with the possibility of either small pilot studies to stay within budget, or, if full funding could be obtained, a full study in the future..

While this was being accomplished, I attended the National Gulf War Resource Center's annual conference in Washington in May 04. While there, I had discussions with both James Binns, chair of the VA Research Advisory Committee, and Dr. Lea Steele, another well respected researcher and committee member. After discussing the sequence of the above events, we were encouraged to submit a revised LOI for the full amount (approximately $1.6 million).

The LOI was again revised, and reviewed and approved by the local Providence VA Internal Review Board. After the VA Washington R&D office approved the LOI, we were then authorized to submit the full proposal, which was accomplished by a great deal of work by all those involved. (See Appendix F) Anticipating a favorable review, all team members were bitterly disappointed to learn that it was not approved for funding. What was even more disheartening was the obvious fact that the reviewers in some cases had no VA specific knowledge, and didn't even know that MAVERIC was the cooperating VA blood repository at the Boston VA. Coupled with no direct dialog to clear up such issues, it appeared that the review basically became a purely academic exercise, and not subject substantive.

Following this disappointment, our team again met, and agreed to again revise the proposal and resubmit it to DOD in time for the March 2005 deadline. See Appendix G.

CONCLUSION

In conclusion, it appears that while all major entities suffer from organizational inertia and are overlain with a system of strict codification which is not easily adjusted, the most serious shortcoming is the lack of personal contact in the review process. The result is that a meaningful dialog, with information flowing both ways is totally lacking. Consequently both sides are left without feedback that could facilitate removing barriers, and moving a project forward. And no where is there a recognition that we have been dealing with a fleeting window of opportunity, which regrettably, may no longer exist, to the detriment of soldiers, past, present and future.

[redacted]

From: GW Pulliam [redacted]
Sent: Monday, November 14, 2005 11:05 AM
[redacted]
Subject: Gulf war / Kamisiyah

To whom it may concern,

I was an Engineer at the ASP known as Objective Gold or Kamisiyah where the nerve agents were release. My unit the 299th was attached to 24th infantry and 38th Engr. Bn. during the times of our search and destroy missions. In such time we had been placing charges on a large number of open air pits/ dirt bunkers containing everything from RPG's mines, arty shells, missiles, rockets and small arms rounds. Boots and other uniform items were in some buildings there as well.

Our squads from C Co. 299th had worked hard under the direction of a LT. from I think B Co. who was instructed to destroy the munitions and look for NBC markings as we primed each "bunker". We were working around dud Cluster bombs that had been dropped prior to our arrival. Very dangerous environment. We had security I suppose from an infantry unit to our East. Another unit I now presume was elements of 38th Engr. Bn. working to our west. Neither of these were in contact with us at least not to my knowledge. We were in touch with a EOD MSG. and Maj. that came from time to time and checked on us and would even give some direction.

Our people rotated each day due to other commitments from higher up, you see as **Engineers we had Dump Trucks Dozers and Explosives.** We could do practically anything, and we did whatever was asked. Even with little down time we worked almost continuously. These Bunkers proved to test our abilities to improvise. You see we were not EOD yet we were asked to identify weapons/ munitions and destroy them in extremely large numbers and with as few detonations as possible. this required Large amounts of Detonation cord that we quickly ran out of. we had performed a test blow at one point to see how efficient our priming techniques proved to be. Remember we are not EOD. I don't recall changing any thing just dual prime each bunker in the center of the Pile.

After about 10 days we were ready to see this thing go. and when it did it really went. For hours we watched munitions exploding from our Dump truck head boards some had even went over our heads and landed 75' behind us forcing us to move away to a safer distance. at one point a artillery shell or rocket not sure which had landed to our east in the perimeter of what we believed to be our security (infantry). upon seeing to dust fly around their M113's they nearly immediately went in to MOPP gear we could hear them and were curious what that was about but we were several hundreds meters away observing this and enjoying our early 4th of July. I can remember for the first time just being able to sit and watch and relax after the mission was accomplished in a daze kind of an R and R for us that was very well deserved. My soldiers had worked hard they had been through allot as Engineers normally do in an Infantry unit.

While we were sitting there the EOD fellows showed up and said that we were stupid and had to leave the area immediately. Now I was pretty "P.Oed" to be called stupid after all that we had accomplished for them we had been used and abused. and remember we were not EOD. Well hind sight is 20/20 now after all this I can see that we had released chemicals or bio-weapons on our own people due to the lack of communication from the highest levels in Government down to the lowest private in the field. Excuses or Reasons I'm not sure.

Wait there is more, after we were ran off and returned to our Company that night , the very next Morning we were directed to go back to Kamisiyah. Ensuring that we had been officially released and the job was complete. Remember we are not EOD nor did we have any information at this time we had released chemicals from those weapons. Upon arrival we coordinated with people from our support Platoon already working at moving unexploded ordinances to a central location for further demolition activities. they were moving munitions by Hand ,dozers and even (M 916's) tractor trailer rigs. I don't recall any one receiving symptoms of poisoning until later after the 3rd detonation. These symptoms were so minor that we didn't relate them to Chemicals or bio

weapons at the time.

After reviewing the case narratives I understand that there was some (a lot) confusion from CIA to the DOD and on. we were collateral damage. we are not informed completely even yet. I put my life and the soldiers at my command in the hands of our intelligence agencies and they failed us. My symptoms are still very painful day to day and I endure just as I and my soldiers did then enduring what ever it took to accomplish the mission and now the mission is get us help.

Testimony of

N. Gale Reid, USAF, Ret (E-5)
[redacted]
Montgomery, AL [redacted]

Members of Congress:

My name is N. Gale Reid, Air Force, Retired, E-5. I am a veteran of the Gulf War in 1991. I worked as an aerovac medic assigned to a Mobile Aeromedical Staging Facility (MASF) near Al Jubayl, Saudi Arabia during the Gulf War. Our mission was to transport and triage casualties for care to either the nearest surgical facility (Fleet Hospital 5) or back to facilities behind lines, to Europe, or to the US.

I spent nearly 13 years in the military in the Reserve and Guard forces, while simultaneously working Federal Civil Service. I was activated to the Gulf War in 1991. I was in prime condition (healthwise) before my deployment, but soon spiraled downward upon my return. My declining health from exposures in the Gulf War caused me to lose my jobs and my marriage. I was working at a VA facility in my civilian job before my health gave out completely in 1994, after collapsing on the PT field during an annual run in my Reserve unit. I had never failed a PT course nor was ever "out-of-regulation" during my entire career up til that time. I encountered blatant ridicule and attempted reprimand from my own supervisor at the VA where I was working while trying to obtain physical and mental evaluations for my exposures and conditions. Fortunately for me, there were some good folks working there in positions of authority who helped me, but I can tell you first-hand there are some very ignorant and uncaring people working there as well. I'm afraid many (if not, most) of my fellow veterans are still encountering the same bad treatment and inadequate evaluations I did just over ten years ago.

Some can give thanks that there weren't many casualties during the war, but that depends on who you talk to and where they were. Sadly, DoD and the media portrayed it as a small, insignificant war with tolerable losses. It took years for DoD to even admit we were exposed to anything after the bombing of Khamisiyah. Then when it did, they, the CIA, and the Institute of Medicine (IOM) played down the effects of environmental toxins and bad vaccines on our soldiers before even researching all the resources available to them (i.e. private research).

The IOM still holds closed-door meetings, accounting to no one what reports they use for their findings used in advising the VA on how to examine and treat veterans who have been exposed to environmental toxins and bad lots of vaccines (mainly anthrax). I find it utterly repulsive that the IOM makes blind decisions regarding the healthcare of Gulf War Veterans based on sanitized information from DoD, then *sells* their findings online as well:

example http://books.nap.edu/catalog/10628.html

I represent just one of thousands of sick Gulf War Veterans who have been forced into physical and financial hardship just trying to prove my conditions were caused by the exposures from the war. I've watched how the VA criteria for service-connection has slowly changed over the years as more conditions have been added and recognized as a result of toxic exposures. Multiple Sclerosis is just one of several more conditions that need expanded research and recognition as a service-connected condition, in light of doctors' inability to "rule it out". Normally, a doctor is required to "rule out" conditions that may be affecting a patient, however, the IOM is ruling out MS and other conditions such as Parkinson's Disease, brain cancer, and heart disease for service-connection in Gulf War Veterans without even considering the research available in the private peer-reviews because DoD has dictated to them and the medical community how to do their own business.

Gulf War Veterans have followed the research and reports of exposures and their effects on troops long before the IOM was asked to do "peer reviews" for these conditions in 1998. Initial reports from the CIA of exposures were questionable at best when the CIA reported they obtained their information from "foreign sources and DoD" in the 1995 Shays Congressional Hearings. As Christopher Shays told the agent from the CIA, 'it was the most unintelligent intelligence report he had ever seen'. Unfortunately, the information in those initial reports were (and still are being) used in recent research because there was no one challenging their data and sources at the time. Information on air particulate matter wasn't even gathered until FIVE MONTHS AFTER the soldiers were exposed to the smoke from the oil well fires. Since then, the information on those reports regarding the effects of the fires have changed on numerous occasions, with different plots of how the plumes of smoke blanketed the area and the number of troops exposed. (example: http://www.iom.edu/file.asp?id=8896 and http://www.iom.edu/file.asp?id=8893)

The IOM even admits to having *"scant information"* on the effects of these exposures on Gulf War Veterans, however the Gulf War and Health Staff refuses to look at the 2004 RAC Report which documents the critical information on exposures needed to consider the effects on the soldiers who were exposed:

http://www4.nationalacademies.org/news.nsf/isbn/0309095271?OpenDocument

(excerpt)
"Because scant information exists on actual exposure levels experienced by individual service members -- a critical factor when assessing health effects -- the committee could not draw specific conclusions about Gulf War veterans' chances of developing lung cancer or any other health problems as a result of exposures. No systematic monitoring of air contamination from oil-well fires was conducted in the Persian Gulf region until May 1991, and this monitoring did not measure levels of contamination produced by other combustion sources, such as heaters or engines. Moreover, no data are available that would allow comparisons between levels of exposure to air contaminants during the Gulf War and exposures to similar contaminants in civilian occupational and environmental settings."

It appears to me the IOM will do only what they are "tasked" to do-- no more, no less; and they make no promises as to whether they will do anything else:

"While the committee might have that information as background it is not part of the committee's task."

and

"The committee might recommend approaches for studies that will provide answers about the health of current Gulf War veterans, as well as for those involved in future deployments."

Someone needs to review their "statement of task" to include something more definitive and productive in its objectives and goals! How about using the information it has from the RAC in achieving a more complete review/study of "deployment-related illnesses among Gulf War veterans that might not be fully appreciated"?

None of these people at IOM have never had to personally navigate the treatment and claims maze, so they have no appreciation of what the impact is on the veterans it serves when facts are ignored, resulting in incomplete and inaccurate evaluations. Perhaps, if they had to be exposed to the toxic environments we were, then to return to a government and medical community for treatment that denied they were exposed to anything, and then merely pointed them in the direction of MHC (Mental Health Clinic), instead of examining them for neurological effects... They MIGHT be more inclined to study the facts a little deeper!

Meanwhile, sick veterans continue to seek help in their care and claims at VAs where healthcare providers know

little-to-nothing in how to refer the veteran for thorough examinations of their symptoms and conditions (because of a lack of reviews and reports from IOM) as a result of their exposures, or document their records accurately for smooth claims process. When VA healthcare providers have little guidance in examining and treating Gulf War Veterans, they cannot document records adequately and the veteran has nothing in his/her records to submit for favorable claims awards. When medical records are void of documentation, the veteran is met with certain denial of adequate care and benefits.

Healthcare providers can help veterans only if and when they have been given complete information from those who advise the VA (the IOM). This information must contain ALL data that could lead to a better understanding of the effects of multiple exposures to a toxic environment. If the IOM concedes that it has insufficient information report on its findings of the Gulf War exposures, it can only be seen as irresponsible if the IOM does not ask for and seek more information in its peer reviews. The RAC has handed them the critical information needed in making a more comprehensive and complete review of more recent and accurate information on those exposures and the IOM has chosen to ignore this without even considering the consequences of their actions on the veterans depending on their findings.

Monetary benefits are only half of the concern when it comes to advising the VA with peer reviews that are current, complete, and accurate. More often than not, veterans are evaluated as having PTSD, depression, or other mental disorders when neurological effects of toxic exposures are ignored. This can only be summed up as "malpractice" when more diagnostic testing is indicated and isn't included in the healthcare protocol to rule out the possibilities of brain damage from environmental exposures.

Although the VA Policy manual for Gulf War Vets is put out by the Environmental Agents Service, few healthcare providers even know the EAS exists! Infact, even though every VA is mandated to have this office and service, I found none existed in Alabama until recent weeks when I asked to have a couple of other of my conditions evaluated by the EAS here in Montgomery.

Because it is easier to treat and diagnose veterans for PTSD and other mental conditions, and because there is little recognized research and reports to guide healthcare providers, the neurological and physiological effects of toxic environmental exposures (to include unsafe vaccines) are neglected, thus jeopardizing Gulf War Veterans' already fragile health conditions.

If anyone is listening and cares, I plead with you to "do the right thing" by the veterans who have served bravely and faithfully when their country called. Quit forcing them into poverty and worsening health because their conditions haven't been thoroughly considered for service-connection or research by the IOM and VA. Expand the research, resources, and care that is desperately needed in order to adequately treat and care for the soldiers who have already served and those now serving in toxic environments.

Sincerely,

N. Gale Reid
[redacted]
Montgomery, AL [redacted]

No virus found in this outgoing message.
Checked by AVG Free Edition.
Version: 7.1.362 / Virus Database: 267.13.0/167 - Release Date: 11/11/2005

[redacted]

From: John James [redacted]

Sent: Monday, November 14, 2005 5:07 AM

To: [redacted]

Subject: Persian Gulf War veterans testimony-Shay committee hearings

To whom it may concern,

My name is Louise James and I am writing this testimony on behalf of my husband Lt.Col. John W. James, USMC who died on December 31st 2003 of a malignant brain tumor (Glioblastoma Multiforme) at age 49. John had served his country and Corps for over 29 years as a CH 46 pilot. John also served in the Persian Gulf War, Operation Desert Shield/Desert Storm from 19 December 1990 until 16 May 1991. He deployed out of New River and Cherry Point with HMM-266 to Jubail. While based at Jubail the squadron few missions to Kibrit, Safaniya, Kuwait, Mishab,Tanajib, Ras Al Mishab, Lonesome Dove and Umm El Maradium Island.

Upon his return from the Gulf there began a general decline of his health over time: night sweats, "flu-like" symptoms, a loss of concentration, increasing headaches, vision problems, sleep problems and "balance" problems. Most of these issues when addressed were explained away by the "op tempo", back to back deployments, long hours at work and the expected resulting fatigue.

On April 4th 2003 John was diagnosed with a brain tumor at Tripler Hospital here in Hawaii after having vision loss and memory loss at work. He lost his most dignified and courageous battle 8 months later.

After much research, and having personal knowledge of many other Gulf War veterans who have died from brain cancer, I am convinced that John's diagnosis and subsequent death was as a result of many factors pertaining to his Gulf War service: anthrax shots (12), PB's, continuous CIPRO antibiotics, petro-chemicals from the oil fires, depleted uranium and exposure to low levels of sarin nerve gas.

I would like to offer any information such as medical records, service records, log book details that John kept from the Gulf War that may be deemed helpful in assisting our Gulf War Veterans in their quest before Congress. I would also be willing and available to attend any future hearings.

My address is:[redacted], Kaaawa, Hawaii 96730.

[redacted]

Thank you, respectfully, Louise F. James.

[redacted]

From: kenneth welch[redacted]
Sent: Sunday, November 13, 2005 7:30 PM
To: [redacted]

To Whom Concerned; I am a veteran of The Gulf War; 1990-91. I know that several of my fellow company members who were in Saudi Arabia and Iraq during this war are Dead now. Many of them Were Young men;Mitchell Mann, Buckwheat Burgess, Johnny Thompson, Karen Stanfill, and several others whom I can name. Many are suffering from a variety of illness's related to our Gulf War experience. We know and have documented accounts of our chemical detection automatic alarms going off while we were over there during the Allied bombings from January16 when Congress voted to give George Bush1 the authority to go to war in Iraq. Being an NBC NCO for our Company, thats Nuclear Biological and Chemical NCO, I assure you that we fully expected Chemical weapons to be used on US Forces.Some of us were assured in our Mobilization training at Ft.Sill Oklahoma during Sept. and October of 1990, that we should Expect chemical weapons to be used on our forces. We were shown film of Iraq forces using Nerve agent Sarin on the Irraneans just a few short years before during their war and we saw bodies in mass which we were told resulted from Nerve Agent Sarin. Sarin is a QUICK KILLER. If a human is exposed to it , it can kill in a few minutes. Death is by convulsions where the victim looses control of all body functions and dies convulsing. I was issued 15 to 25 huge viles of anti convulsive agent to administer to a casualty when they had taken all 3 atropine injections and the person giving his atropine had exhausted all of his. If the symptoms didn't reverse on the soldier we were to give him or her an injection of the anti convulsant so he or her could stop the convulsions while dying. We were exposed to low levels of Sarin during our time in Northern Saudi Arabia, on the Iraq border during January and February of 1991 because the wind was blowing toward our forces and the allied bombs were destroying the Iraq bunkers containing chemical weapons.This is why veterans of that war need to be tested, treated and awarded service connected disabilities where they are found, The time needs to be extended to cover veterans who may have been exposed to all the many agents, vaccines, pesticides, and other causes of health problems related to that War. Sincerely, Kenneth Welch NBC NCO for 2120th Combat Support Company During the Gulf War, Desert Storm. [redacted], Stephenville,Tx. [redacted]

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http://farechase.yahoo.com

[redacted]

From: [redacted]
Sent: Sunday, November 13, 2005 7:09 PM
To: [redacted]
Subject: PGW service and aftermath

I am providing the following information regarding my Gulf War service in the hope that this and the experiences of others in like circumstances, will convince Congress that much still needs to be done to adequately address our problems.I know I have not suffered to the level of many PGW participants,but, I empathize with all who served and suffered.

William A Schober CW2 [redacted]

Desert Shield/Storm- 715th Maint.Co. (FWD) Birmingham, AL

PGW Active duty: 09/90-07/91 OCONUS: 10/90-06/91

Duty stations in Saudi Arabia include Port of Dahran, Eskan Village-Riyahd, KKMC

Attached in Riyahd to 2nd ASB, 593rd ASG, 22 SUROUS

Within months of release from active duty I began to experience rashes, insomnia, extreme joint pain, fatigue, night sweats, disturbing dreams, and severe mood swings.

I was treated in Riyahd for inflammation in my arm from a suspected insect bite, a severe bronchial infection attributed to dust storms in the area, and a hip injury suffered in a fall during a SCUD alert. To date, none of my medical records for my period of active service have been located. The 715th was disbanded in, I believe, 1994.

At the urging of friends and relatives, I consulted a private physician at Baptist Princeton Hospital in 1992.

I enrolled in the PGW clinic Birmingham VA Medical center in 1993.I participated in numerous testing and treatment programs and was prescribed a myriad of medications for what was termed "undiagnosed illnesses".

I was referred to the Birmingham/Jefferson County Veterans Administration office by a Social Services representative at the VA Hospital and contacted Mr. Bruce Herndon. I applied for compensation in late1993 or early 1994 and visited Bruce's office numerous times until 2004 to fill out forms, provide documents, written personal testimonials, and answer denials.

I filed a service connection claim for PTSD based on severe depression/mood swings, persistent insomnia, also for hypothyroid condition, joint pain, painful rash of unexplained origin, and memory loss.

All claims were denied at various times during the hearing process as not being connected to my PGW service. Despite all efforts on my part and the

large body of evidentiary research to the contrary, I cannot convince the VA that my physical/mental condition before and after PGW service are markedly different.

I traveled by automobile with my Son to Washington, DC 09/2004 to appear before the Appeals Board and was represented by Jeffrey Steele of the American Legion. The board concluded that my case should be remanded back to Montgomery, AL for review 07/2004. I have had no contact regarding my case since that time.

I am currently under the care of a private physician and I am taking medication to treat the thyroid condition, muscle spasms, and insomnia. The very painful rash I have experienced over the years is now being treated by a private physician. The origins of the rash are as yet unexplained deapite much testing.I also regularly visit a Doctor of Chiropractic to deal with the joint pain and stiffness. The chiropractor has advised me on an exercise program to marginalize the effects of my chronic joint pain and stiffness.

Thank You and God Bless America

[redacted]

From: Ed Butler [redacted]
Sent: Saturday, November 12, 2005 7:54 PM
To: [redacted]
Cc: [redacted]
Subject: Testimony of Edward Butler Jr., Nov 15th hearing

Testimony of Edward Butler Jr., Co-founder of MSVETS,
Before the Committee on Government Reform, Subcommittee on National Security, Emerging Threats, and International
Relations November 15, 2005

Mr. Chairman and members of the committee, I am honored to have the opportunity to submit for today's hearing on
VA Implementation of the Persian Gulf War Veterans Act of 1998

I report to you today that the VA continues to ignore the laws and directives that have been set out by Congress, In the Persian Gulf War Veterans Act of 1998.

Gulf War Veterans continue to turn to the VA for treatment and compensation only to be denied appropriate compensation due to the lack of education of VA clinicians of the multi-focal presentations of what has been dubbed Gulf War Syndrome.

I wish to bring to your attention one presentation of a Gulf War Illness that is affecting a large percentage of Gulf War Veterans. Auto-immune disorders vary widely within the Gulf War Veteran community but, we are seeing a large number of our veterans that are developing Multiple Sclerosis.

Multiple Sclerosis is a presumptive diagnosis in itself. There are no definitive tests to verify the presence of the disease. Diagnosis is made through medical history and cumulative findings from a battery of diagnostic test. But, still there are other disorders that can mimic the presentation of Multiple Sclerosis.

The VA recognizes that Multiple Sclerosis may be service connected and there is a seven year presumptive rule in place for Multiple Sclerosis sufferers that have served this country. But, for those that served during the 1991 Gulf War, this seven year rule is not appropriate. The numbers of Gulf War Veterans that are developing Multiple Sclerosis continues to grow today. These veterans that failed to develop the disorder before the seven year presumptive period are denied service connection, compensation and treatment. The VA's seven year presumptive rule is placed before the Persian Gulf War Veterans Act of 1998. Multiple Sclerosis is a poorly defined illness of unknown origin and should be considered the same as an unknown illness.

Here is my account of having Gulf War Syndrome, the disorders I have endured and my experience and treatment by the VA medical Center.

My original diagnosis was of Gullion Barre Syndrome, A peripheral nerve disorder. Then after a second neurological event in 1997, I was diagnosed with Multiple Sclerosis by my private physician. At this point, I began to look towards the VA for treatment and compensation. I was granted the minimal 30% rating for Multiple Sclerosis. For a period of time it was thought that I may have had ALS as well.

I had previously gone to the VA due to severe dental problems. My teeth would blister and large pieces of them would break away. After several calls to my primary care physician, I was granted a dental appointment. The dentist preformed an x-ray and decided that my teeth needed to be removed emergently.

Other ailments that I have developed are bilateral, retinal branch vein occlusions, Iritis, uveitis (both without optic nerve involvement). Attempts to treat the Iritis and Uveitis have left me visually impaired in the affected eye. I have had a minor stroke. For a period of time I had motor seizures. And my breathing function test shows that I

have the onset of Chronic Obstructed Pulmonary Disease. This was not noted by the VA clinician. My private physician made note of the results when I provided him with a copy of the test. I have a persistent skin rash. I was also diagnosed with a systemic infection, Mycoplasma Fermentins. Anti-biotic treatment for the mycoplasma has proven in my case to bring about a remission of the Multiple Sclerosis symptoms. The VA has the ability to perform the test needed to identify the Mycoplasma infection. The test is called a DNA by PCR. The VA refuses to run the required laboratory test and instead runs a test for a mycoplasma titer. So, it appears that I do not have the infection as previously diagnosed. The result has been that the VA clinicians will no longer write the prescriptions for the Anti-bionics that I need to fight the infection and I am forced to rely on my Private physician and health insurance to acquire the medications that I need. None of the secondary disorders that I have mentioned are related to the diagnosis of Multiple Sclerosis. My disability has been progressive but, I remain at a 30% disability rating.

My original claim was submitted and granted in 1997. Due to progression and the unrelated disorders, I had filed for an Increase in 1998. The VA response has been a process of denials, appeals and remands of my case, which remains unsettled today.

If I were not in my present employment situation, I would not be able to remain working. I have been employed by the State of Missouri, Department of Mental Health at the Higginsville Habilitation Center since 27 November 1989.
My supervisors have been kind enough to adjust my duties and responsibilities around my limitations. Because of the progression of my condition I have been forced to take a position on the 10P.M.-6A.M shift to be able to continue to retain my employment.

Although I am still employed, I have lost a large portion of my income. To be able to keep up with nursing skills unrelated to mental health I had part time employment working on an acute care ward at an area hospital. My condition has advanced to the point that I had to abandon the additional work.

Due to the weakness in my legs, I can no longer safely transfer patients. I become fatigued much easier now and working on a busy acute care ward is no longer an option for me. I have considered seeking another vocation due to the progression of the disorders that I have developed after returning home from the 1991 Gulf War. I have worked and studied to become a clock maker for two years. Fatigue, tremors and vision problems have removed that option from my future. The cognitive problems associated with Multiple Sclerosis and other Gulf War Syndromes, compounded by the physical limitations that these disorders impose on those that are affected, removes the option of re-educating or retraining for other vocations in this group of Gulf War Veterans. The social and economic impact of having an ill group of veterans is rarely talked about. But there is an impact on the communities that the ill veterans live in. I hear from other veterans across the country, the same stories are reverberated. Homes and cars are reposed. Utilities are disconnected. Spouses and significant partners become discouraged over the financial hardships imposed by the veteran's illness.

I can not tell you every ill veteran's story but, they are mirrored in mine. I have been fortunate in the fact that I have been able to retain my home and car. The house is in ill repair and the cars maintenance is sparse at best. My spouse, I was not able retain. She stuck with me for five years after I had fallen ill. She and I were confident that the promises made by the government, that if I were to fall ill due to my service to this country that I and my family would be taken care of by the Veterans Administration.

It's been another four years since my wife and I divorced. I am still waiting and holding on to the promises made. It's sad to report but, she has found a more comfortable life as a single mother than what I was able to provide due to my disabilities from service to this country.

This story is played out again and again across the nation. The communities are forced to absorb the cost of ill veterans from lost wages, uncovered health care cost and increased insurance premiums. Broken families that when divided, qualify for low income programs. It has been 14 years since the end of the first Gulf War and many Gulf War Veterans claims and health care issues are still unresolved. The VA claims to be back logged on veteran's claims with greater than 300,000 claims pending as of April 2005. But, as of August 2005 the VA appears to have the man power and resources to reopen veteran's claims for PTSD and threaten the livelihood of 70,000 veterans.

Restraints are already being felt by those that serve in Iraq and Afghanistan as the VA has placed a two year presumption for service connection for PTSD on this group of returning veterans, with experts' acknowledging that one out of five of those serving in harms way today will be affected by PTSD. Congress and the Senate have done their parts by introducing new bills and laws in support of veteran's health care and benefits. The Veterans

Administartion simply fails to meet the needs of our veterans. Recently the V.A. requested another $300 million dollars for funding on top of the $975 Million that has already been requested. Why does the VA need additional funds when they develop rules that turn our veterans in need away?

I present to this committee evidence that Multiple Sclerosis is an ongoing and prominent disorder that will continue to develop within the Gulf War Veteran Community.

This Gulf War Syndrome is not just confined to Coalition forces that served during the 1991 conflict. As this reported by the Department of Neurology in Kuwait will show that people of Kuwait and Saudi Arabia, Areas that have had a traditionally low rate of Multiple Sclerosis, are now seeing increased rates of the disease.

Ibn Sina Hospital, Safat, Kuwait. alshubaili@hotmail.com
the epidemiology of multiple sclerosis (MS) is undergoing dramatic changes; MS is occurring with increased frequency in many parts of the world. In this retrospective study, we examined the changes in incidence and prevalence of MS in Kuwait in the period between 1993 and 2000. We analyzed the records of patients with clinically defined and laboratory supported MS. The total incidence rate increased from 1.05/100,000 population in 1993 to 2.62/100,000 in 2000. The increased incidence of MS was most pronounced among Kuwaiti women (from 2.26/100,000
in 1993 to 7.79/100,000 in 2000. The total prevalence rate increased from 6.68/100,000 in 1993 to 14.77/100,000 in 2000. It was much higher for Kuwaitis (31.15/100,000), as compared to non-Kuwaitis (5.55/ 100,000), in a complete reversal of the pattern observed before 1990. The prevalence was also higher among Kuwaiti women (35.54/100,000), as compared with Kuwaiti men (26.65/100,000). In conclusion, the incidence and prevalence of MS
in Kuwait has increased between the early and late 1990s with no signs of leveling off. In a geographic area that was previously associated with low prevalence, local environmental factors may be responsible for these dramatic changes.

I am asking congress to order an investigation into the numbers of Gulf War Veterans that have applied for compensation for Multiple Sclerosis or other auto immune disorders and unknown illness. That the investigation look for trends in cases that might indicate a presumptive clinical picture of Multiple Sclerosis. And to divide these in two groups as those deployed and those deployed in the combat theater of operations.

We do not need another study into Gulf War Illness. We need action taken on the evidence and studies that have been preformed. Fourteen years of sick and disabled veterans coming forward and current science has proven that an event or events have produced illness in the Gulf War Veteran population. A study of the Veterans Administration's practices and management skills might be more in order. Failure of the Veterans Administration to complete claims and services to this nation's veteran is not just a veteran's affair. This failure affects the states and communities where those veterans reside.

The Yahoo health groups MSVETS has been operating since September 2002, to be a clearing house of information to Gulf War Veterans with Multiple Sclerosis and a rally point for our veterans with this and other auto-immune disorders. MSVETS receives no funding to operate and is not considered a 501 (C) (3) organization.

Bio for Ed Butler:

Ed entered the Army in August of 1985. Ed was trained as a combat medic (91A), NBC instructor and Licensed Practical Nurse (91C).
Ed was a member of the 325th General Hospital, Independence (USAR) When he was activated for operation Desert Shield/Storm. Ed was then assigned to the 159th MASH, Louisiana (LANG) and attached to 3rd Armor Division, VII corps.
The 159th MASH had seen more than 300 causualties during the ground war and was the only medical unit to report chemical casualties.
Ed took a position with the State of Missouri Department of Mental Health on 27 November 1989 at the Higginsville, Missouri facility where he remains employed today.

[redacted]

From: Margaret Diann [redacted]
Sent: Saturday, November 12, 2005 2:17 PM
To: Mike Barber
Cc: [redacted]
Subject: This chemical exposure - a better match for harm

http://seattlepi.nwsource.com/local/247343_msvets07.html

www.valdezlink.com/same.htm
2-butoxyethanol or 2-2-butoxyethanol

If you have questions, ask me

I recognize this chemical's harm

Margaret Diann Hursh [redacted]
[redacted]
Valdez, AK 99686

www.valdezlink.com/pages/alsforum.htm

www.valdezlink.com/pages/diabetes.htm

www.valdezlink.com/pages/lostchildren.htm

130 pages of info - organized for discussion:
http://groups.msn.com/Avoid2-BEforHealth-MM

Elizabeth E. Burris
[redacted]
Tacoma WA [redacted]
[redacted]

Branch of Service: Army
Dates of Service: Aug 1973-July 1978 (active duty enlisted)
Sep 1982-Oct 1992 (active duty commissioned officer)
Oct 1992-March 2003 (commissioned officer Army Reserve)

Rank: LTC Army Reserves

Dates in Persian Gulf: Oct 1990-Aug 1991
Rank and Occupation in Persian Gulf: Captain, Medium Truck Company Commander
Area Served in Persian Gulf: Dhahran, Log base Bastogne, areas close to the Kuwait Border.

My name is Elizabeth Burris, I am a Gulf War Veteran, and I have been diagnosed with Multiple Sclerosis, Sinusitis, Degenerative Disk Disease and PTSD.
I believe that many of my health problems can be directly linked to my exposure to oil smoke, PB pills, sarin gas, and immunizations.

My health problems began soon after arriving back to the United States, early September 1991. I was experiencing night sweats, rashes all over my body, swollen joints, extreme fatigue and severe chemical sensitivity. I could not enter any building that was new, or any store that contained a large amount of plastic products. If I did come in contact with plastic products I would become very dizzy, disoriented and extremely fatigued.

In 1993 while attending graduate school, I experienced severe lower back pain, and was unable to walk for over a month. I was diagnosed with degenerative disk disease, with severe disk herniation in my lower back. I continued to complete my graduate studies, often lying on my stomach during lectures. From 1993 to 1996, through intense physical therapy, I finished my studies and graduated with a Master's in Occupational Therapy. From 1997 to 2000 I continued to experience sporadic episodes of extreme fatigue, but I continued to work full-time as an occupational therapist. These instances of fatigue would usually last 1-2 weeks and then lift. I would experience a couple of these attacks of fatigue per year. Often during these weeks of fatigue I would also experience dizziness.

The intervals of fatigue started to grow longer and with less time between attacks. In 2001, I went to a civilian doctor for a secondary problem of frequent urination. It was during this examination that the physician saw signs of neurological dysfunction. I had a brain MRI and the diagnosis of MS was given.

Since 2001, I have experienced greater severity of my fatigue and dizziness. I cut down my work schedule to 4 days a week and pared down the number of outside activities. In March of 2003, I was no longer able to perform my reserve military duties, and retired from the Army Reserves. In June of 2003, I was no longer able to sustain an 8 hour work day, and I received a medical retirement from my employer.

In December of 2003, I was awarded 100% disability from the VA due to my service-connected multiple sclerosis.

My disabilities have affected me and my family greatly. I am no longer able to care for my 17 year-old son, Marc, who has Autism. In March 2004, Marc was placed in a group home, where he continues to live. In August of 2004, my husband, who at that time was 49, was diagnosed with prostate cancer and underwent a total prostatectomy. During his recovery time I was unable to care for him.

I am not the energetic, physically fit woman that I was prior to the Gulf War. Many days I can barely take care of my own personal care, and need frequent naps just to make it through the day. My immune system is so fragile, that I am now allergic to a host of substances. Any type of routine dental or medical work can completely disrupt my system making me sick for weeks.

I am asking for continued funding and research for Gulf War Illnesses. I also believe that a significant number of Persian Gulf Veterans have neurological disorders. I am requesting a comprehensive medical review of all Gulf War veterans. Many Gulf War Veterans diagnosed with fibromalygia have never been examined to rule out Multiple Sclerosis or other neurological disorders.

Please continue the active funding for research that is so critically needed for Persian Gulf Veterans. We defended our country when asked, we now ask you to support us.

[redacted]
From: Steve Ferguson [redacted]
Sent: Friday, November 11, 2005 11:53 PM
To: [redacted]

Importance: High
Sensitivity: Confidential

I am a Persian Gulf war vet and have the following disabilities:

1. **Sleep disorder**
2. **Chronic Fatigue**
3. **Type 2 Diabetes**
4. **Hypertension-On medication**
5. **Hypothyroidism**
6. **Hearing loss**

Steve Ferguson

[redacted]

From: mthompson[redacted]
Sent: Friday, November 11, 2005 5:14 PM
To: [redacted]
Subject: multiple sclerosis/ exposure to vaccination against anthrax 1991

I served in the gulf war 1991 and have the anthrax A-1 and A-2 vaccinations documented in my shot records. In August of this year Mayo clinic has me diagnosed for treatment of MS. I as of sept. 20, 2005 I now have a service claim put in by a service officer. From the end of my enlistment I have repeatedly phoned the V.A. Hospital to find out what those shots were and if there had been any problems arising from them all I had been told was that I should put in for comp disability paperwork. I have an interesting story if you would like to hear it [redacted]

Thank You, Matt

Statement for the Record by
Julia Y. Dyckman, RN, MPH, Capt USN- Retired
for
House Government Reform Committee
Subcommittee on National Security
November 15, 2005

I would like to graciously thank the Committee for allowing me to submit my concerns regarding Persian Gulf related research. My name is Captain Julia Dyckman, United States Navy-Retired.

At the time of the Persian Gulf War, I was a Commander in the naval reserve that was activated January 15, 1991 to serve at Combat Zone Fleet Hospital 15. Fleet Hospital 15 was a 500-bed hospital with 948 personnel including a Seabee construction battalion. It was assembled at a site west of Al Jubayl, Saudi Arabia. Before leaving for this assignment I was in excellent health, having just received a physical prior to being mobilized. While in Saudi Arabia I began with the initial symptoms of uncontrollable tachycardia and open skin sores and lesions. These were the forerunners of what later became an increasing number of diseases. Thus far I have been involved with various treatment protocols under private physicians without success (VA has no treatment protocols for undiagnosed illness). Many people have been involved in the search for the etiology of this illness involving millions of dollars of research with limited success. I have testified before congressional committees on problems associated with the Veterans Administration system in the diagnosis and treatment of Gulf War veterans, which has resulted in some small changes to its bureaucratic maze.

Definition of Illness

It has already been stated by DoD and VA that there is no new single disease, thus resulting in Persian Gulf illness being called "undiagnosed illness." However, research has adequately shown that most Gulf War veterans have symptoms that involve several organ systems simultaneously. These symptoms are consistent and unique as a whole package. The whole Persian Gulf War experience has produced health consequences that are defined by this package of a combination of symptoms.

The Gulf War, because of its unusual characteristics of dealing with depleted uranium, pesticides, insecticides, chemical and biological warfare agents, vaccines, PB, heat stress, solvents, paints, fuel, smoke from oil well fires and sand, has produced a Gulf War Syndrome, not an undiagnosed illness. This syndrome is singular and not easily confused with other syndromes or illnesses.

More and more studies have shown that illnesses like ALS, MS and other neurological disorders (autonomic nervous system dysfunction) are showing up in Persian Gulf veterans in a higher percentage than in the general population. This implies that some illnesses take longer than others to gestate and cause severe problems. Many veterans

don't report minor symptoms and wait until they can't function either in the military/reserves or the work place.

Recently I was involved in a study that was looking at depleted uranium. However, the study did not show that I had depleted uranium, but had high levels of tungsten in my body. DoD is currently using tungsten to coat weapons instead of depleted uranium. Neither DoD nor the VA has come forth with this information. This is another example of a toxin that personnel had been exposed to in the Gulf War. Since tungsten is currently being used it poses a hazard to today's troops. Therefore extensive studies should be done on its danger to the human body (Gulf War veterans are a good study medium for the long term effects of tungsten.).

In 1996, evidence was found that higher than normal levels of squalene were present in Gulf War veterans. The source of this squalene was probably immunizations. Just recently the DoD has admitted that there are low, naturally occurring levels of squalene in the anthrax vaccine. Squalene is already known to cause medical problems in some individuals. However, it was used in the first Gulf War. Therefore the long term effects should be studied, and it should be determined if squalene is still being using in immunizations to this day.

I am seen at two VA Facilities, and I am seen by a Primary Care Physician and every 6 months by a designated Persian Gulf Physician. They treat me for hypertension, chronic fatigue, fibromyalgia, etc. I am not being treated for Persian Gulf illness or undiagnosed illness but for a series of symptoms (because I have specific illnesses, nothing on my record shows that I have Persian Gulf illness). Since I do not have Persian Gulf illness, I am not eligible for extensive testing. To get a Sleep Study, it took almost two years.

Suggestions for Improvement

1. Coding
   - It is ironic that the medical establishment in the form of *Tabor's Medical Dictionary* and the *Merck Manual* have a definition of Persian Gulf Syndrome but the Center for Disease Control (CDC), Department of Defense (DoD), and Veterans Administration (VA) do not recognize it as a disease.

   - A diagnosed disease has an ICD-9 code, an undiagnosed disease does not. We cannot continue to deal with an undiagnosed disease because an undiagnosed disease is not considered a "REAL" disease.

   - A "real" disease is coded and named. This coding and naming allows patients to be tested, treated, covered by insurance and even possibly compensated. According to the VA approximately 202,000 claims have been filed for compensation by veterans of the Gulf War. However, most of the veterans are NOT treated by the VA and, in the case of reservists, are not eligible for military care. Therefore many veterans are not being treated by the Veterans' Administration but by private physicians under Medicare or private insurance.

- Medicare or private insurance will NOT pay for an undiagnosed illness; it will not pay for screening tests of an "unrecognized illness." Physicians are not paid by insurance for treatment of undiagnosed illnesses. Many physicians are reluctant to treat multiple symptoms in an unrecognized illness that has a bizarre number of symptomology. I personally have been rejected by at least three separate physicians since they do not know what constitutes "Persian Gulf illness" or how to treat it. Those physicians who are willing to work with veterans are hamstrung by not having a proper ICD-9 code to put as a diagnosis. Hence a veteran cannot get insurance to pay for the needed extensive testing, advanced treatment and medication without a matching diagnosis.

- How can you recommend additional scientific studies if we are not dealing with a real illness? People are dying from a real illness, not an undiagnosed illness. At the end of 2005 you need to fully admit that 1991 happened, that the Gulf War was a **real** war and that it had **real** health consequences that are continuing today.

2. After providing a coding, veterans need to be identified properly. This allows them to have access to other programs. Hence medical treatment protocols can be developed and you can gauge the effectiveness of the treatment, e.g. now they are treated for MS, or ALS, or hypertension, or chronic fatigue, when in fact they are all related in some way. Medical problems are not being identified as combat related. Therefore veterans are not eligible for Purple Hearts, or other compensation. This is important since all DoD programs are based on type injuries, e.g. Combat Related Special Compensation (CRSC) is based on an injury, not an combat-related medical illness.

3. The duration for recognizing and reporting Persian Gulf related illnesses needs to be extended beyond 7 years. As mentioned before, many illnesses are only now being recognized as tied to the Persian Gulf, e.g. MS, ALS, neurological disorders, and recently tungsten. Therefore, extend the reporting period.

4. Extensive testing on the effects of tungsten need to be performed since this is in our current weapons inventory and seems to have been used during the Gulf War. Tungsten is a heavy metal and is damaging to the human body. DoD needs to be proactive and bring forth other possible toxic materials that have been and are being used in the military. This will increase the probability of discovering the causes of Gulf War illness and also prevent problems in the military in the future. (Tularemia was recently found on the Washington Mall. Research into chemical/biological weapons and their effects will also help the general population). You already have proof that unexpected depleted uranium residue was found on equipment, on the battlefield and in people's bodies. Yet it is stated that these abnormal levels are not a health concern even though zero levels is the only true normal. This is also true of tungsten.

5. Recent tests have shown that Tamiflu, the possible solution to the potential bird flu pandemic, also helps with the symptoms of Gulf War Illness. It also works on chronic

fatigue, an auto-immune disease (the system most damaged by Gulf War related illnesses). This possible treatment and the reason WHY it works should be studied in detail.

In conclusion, these suggestions can help resolve problems associated with service in the Persian Gulf. I served in Vietnam and the Gulf War. Each of them involved dangerous exposures. I recognize that danger is inherent to service. I have three sons serving with the Navy. Continuing research can help minimize the effects of chemical, biological, and environmental factors on our military and will keep our current and future troops as safe as possible. This research could also provide information in regard to potential terrorist threats against the general populace. I am plagued with daily chronic pain, constant nausea, headaches, muscle aches, chronic fatigue and being unable to work. If this information can reduce the potential for others becoming ill, it is well worth it.

Julia Y. Dyckman
Captain, Nurse Corps, USN-Retired

[redacted]
Harrisburg, PA [redacted]

[redacted]

[redacted]

[redacted]

From: [redacted]
Sent: Thursday, November 10, 2005 12:47 PM
To: [redacted]
Cc: [redacted]
Subject: Gulf War Syndrome

Ms. McElroy,

Thank you for your time. I am a Gulf War Vet who was in the area of Khamisiyah, Iraq. I was in A Co 5th Engr BN, assigned to the 1st BDE 24th INF DIV. I just wanted my testimony to be a part of the congressional hearing.

I was checked in the Gulf War program after returning home, at Fitzsimmons Army Hospital in Denver,CO. When I received a letter, I still have from the government stating I was in the affected area, I contacted the hospital and was told, "My records don't exist and that they had no record I was ever there." That was the beginning of my frustration for sure. I have even tried to have the Disabled American Veterans, DAV, try to find them and they cannot. Because of this I cannot get Combat related compensation and I cannot get any disability for the Post Traumatic Stress Syndrome I was diagnosed as having. Because there is no official documentation for it. I can't even get counseling or treatment for it. Good luck if you can find them!

The symptoms I have had for the last 14 yrs are, serve vertigo, the appearance of things in motion that are not moving at all, numbness in my legs, arms, and hands, hot places throughout my body, reoccurring diarrhea, serve headaches, hearing loss, reoccurring dreams, explosive and fast anger, loss of rational behavior when angry, and as all my kids and wife say, inability to socialize with other people. I have lost 2 jobs because of these symptoms and almost my family.

I am receiving 30% disability from VA for having "Menre's Syndrome," because they acknowledged the symptoms, but because of that I am having an extremely hard time proving it is combat related. Because no one wants to acknowledge it resulted from the Gulf War. Even though the symptoms were not present until I returned from there.

Please helps us!

Jay M. Hill
[redacted]
Loveland, CO [redacted]
[redacted]
[redacted]

[redacted]

From: Marilee Lahn [redacted]
Sent: Thursday, November 10, 2005 9:54 AM
To: [redacted]
Subject: VA Funding

This is is response to an article in the PI re: VA funding for Gulf War1 Vets with resulting illnesses. My son in law Sean served in Kuwait for 1 year and was part of the ground troops that were exposed tp burning oil wells, and demolished chemical and munition caches as well as the drugs that
the government gave the troops to "protect" them from unknown illnesses. Five years after his return he began to experience unusual symptoms that were eventually diagnosed as ALS (Lou Gherig's disease - a fatal, degenerative disease) and has been under the VA's medical care since then. The VA has done a tremendous job of caring for Sean and has supplied him with most of the things that are making his life as comfortable as possible at this time. He was given a predicted 3 - 5 years to live and has survived past that mark. He is currently paralyzed from the neck down and requires 24 hr care for which the VA provides caregivers for 20 hrs/week. The rest of the - MOST of the time - Sean is cared for by his family, primarily his wife. (my daughter). This is NOT the time to be cutting ANY VA money. With the first Gulf War vets continuing to exhibit medical and other needs and an unknown number of needs forthcoming for the current troops they are going to need and DESERVE all the help the VA can give them.

If you want any more information or comment, my name is Marilee Lahn. I live in a house with my daughter and son-in-law that we built to be disabled-assisted for Sean.Sean's full name is Sean David REddeclife a[redacted]e [redacted] Seattle, Wash [redacted]. [redacted],

[redacted]

From: M. Bogden [redacted]]

Sent: Tuesday, November 08, 2005 1:37 AM

To: [redacted]

Subject: Veteran michael Bogden gives his views on GULF WAR ILLNESS

Dear sir or mam; It is an honor to be able to write a brief but yet true hard case of Gulf War illness. Dear sir or mam respectively, I gave my all to the US army, I was one of the finest soldiers ever to put the uniform on.(my records attest to that fact); I went to the first desert war, believing that my country had called upon me, to in some cases,for me to give my life, I was ready. During the conflict; there many odd things that happened to us, we had to have our chemical mask with us at all times, but when our m8 alarms started sounding, we were told "do not worry about it., It is only bad batteries," I just put a new pack in that morning. We HAD to take little pristine bromide tablets,the section sgts walked around and watched everybody take them. all the time, but we were told.later you, only have to take them if you want to. On a clear day, a mist like that of a squirt bottle set on low, came down upon our unit, I saw the mist and it went into my skin, I was tan then, so I saw it more easily than if no tan. 15 hours after that, I woke up at 0100 hours with projectile vomiting, diarrhea,and severe dehydration, I spent a day in the medic tent getting I.V. bags to replenish the moisture lost. It took two of the big packets, just to moisten my lips. (I drink allot of fluid then, and now) but soon the dehydration turned worse. I was released from the medic tent to get some rest. I soon felt blisters forming like a canker in between my toes, it looked like vanilla custard in color, and it was not nice to look at.it was tablespoon depth in between the toes They put me in the field hospital, for three weeks, and got it under control, in the meantime, the blisters took over my hands as well. I also saw the blowing up of the kamiseah weapons complex while in the field hospital ; we thought a nuke went off. I was soon told to report to my duty station, where I was then told I had to stay in country, to clean vehicles before returning to my base in bindlach Germany. Once home, I soon felt my health deteriorating, at a quick pace. I started falling out of runs, and could not regain my healthy self before the gulf. I got out of the army in the FRG; and was soon to learn that our baby, was born with a RARE chromosome defect, so rare, that the German doctors did not know, what to do or say; We asked about this to the base in bindlach, to no avail, she was induced, and was born dead without a face from forehead to jaw,. Then my skin problems with the canker came back, this time it was worse than the first time. We used strong medicine to try to kill it.(we got it under control again), Now that was in 1991-1992, fast forward to 1993, I came home state side, to work on a ranch, and my ranching career was cut short, by pneumonia episodes, followed by bought of bronchitis, this recurs every year, now 2005 My memory is going so bad, that I need to write everything my wife tells me; I have fibromyalgia, so bad I need a disabled parking permit to park close to the hospital or other places. I am 37 years old, I have bad lungs, my lung function is that of a 89 year old man, and seems to be getting worse, if you were to look on the x rays for my lungs, they would be clear, it is the function that is messed up, I cannot utilize the oxygen the right way.the va wants to say asthma, I know deep in my heart it is DU. I had yet another flare up of the cankers in my toes and on my hands, when I was stateside going to Bible School,
My wife and I have had 4 miscarriages do to chromosome problems. We now have two healthy boys now, thank GOD for that.
Sir or mam respectively this should not be, we as DESERT STORM veterans, need your help in getting answers to our failing health. Either the VA knows all they need to know or they do not; we feel they have not answered the questions that the surviving - dying veterans are wishing to know. We would like the VA to study real veterans, not computer models, ask us what happened take blood, do something, turn over new ideas into medical questions, and go after the problem, not from some preconceived idea of the outcome , but from INDEPENDENT studies. Do not be told what the outcome will be, from some body in the DOD, or pentagon, we need the truth before we are all gone. In closing, WE are not discontent people, out looking for handouts, I can assure you of that. We did not wish this upon ourselves, as some plot to get money from the government. No we are ailing veterans of the United States Of America, who want the truth, and would like to see the correct action taken by the VA, please recognize the ailments for what they are, if they are not service connected then why did this or that person just so happen to be a Desert Storm Veteran? We can see the forest for the trees, because we have been there; our bodies show things that others do not , we have been in the forest, because our government sent us , ask us we will tell you.
Thank you sir or mam, for allowing me to share with you, the issues that have been a part of my life; as well as others for a long time.
Thank you
and God Bless

Contact information Michael Bogden [redacted], Corbett Oregon [redacted].
[redacted]
Branch= US ARMY 1/2 ACR BINDLACH FRG
dates served : Beginning of Desert shield- end of conflict. Guarded Kurds from the Iraqi armor after conflict. came home April of that year. I did not have a calendar with me, to mark dates, so all occurrences happened between start,to finish.
thank you

[redacted]

From: [redacted]
Sent: Tuesday, November 08, 2005 7:57 AM
To: [redacted]
Cc: [redacted]
Subject: Testimony for the November 15th Rep Shays Committee

Edgewood Test Veterans - we are a group of men who were used in chemcial weapons and drug research by the US Army and the CIA from 1955 thru 1975 at Edgewood Arsenal Maryland.

The Institute of Medicine MUFA unit issued a report in March 2003 by Doctor William Page, that stated the only conclusion he could make after the data was gathered in FY 2000, by a private company from Silver Springs Maryland. The report concluded that the only long term health problems that the veterans exposed to Sarin showed were a higher rate of brain tumors and sleep disorders.

I would like to point out that a January 1994 report from the National Institue of Health,
Toxicity of the Organophosphate Chemical Warfare Agents GA, GB, and VX: Implic which shows that long term health effects include delayed onset cardiac problems. Why was this report overlooked in Dr Page's research.

I would also like to point out the perceived flaws in the March 2003 report that I see, they never addressed why they could not locate 3098 men using VA, IRS and Social Security records. The previous report in 1985 showed a total of 385 men that were deceased, but by 2000, just 15 years later the death toll appears to multiplied drastically to 3098 men.
The report does not explain what or why these men died prematurely before the age of 65.

The 1985 report shows that a high percentage of men died from cardiac problems in the age range of 40-45, a few died in combat in Vietnam, but approximately half the deaths were from heart disease.

The March 2003 report did not even address pulmonary, gastrointestinal and nuerological or cardiac problems. Yet all previous studies of chemical weapon exposure show that these areas of health are affected by the exposure. There is a 1975 report published by the Stockholm International Peace Research Institute, written by a Doctor Wlihem Lohs that was done on the Wermacht soldiers of WW2. The German government paid these men disablity payments and medical treatment until their deaths. This is the web address for the report
http://projects.sipri.org/cbw/research/cw-delayed.pdf

There are very few chemcial weapons research papers available as most countries did not expose their own citizens serving in the military to experiments for research.

In October 2003 the VA released a manual for Chemical, Biological and Radiological Weapons exposures, many of the symptoms listed on pages 17,18 and 19 list the known medical problems caused by exposure to chemical weapons, are the symptoms complained about by the Gulf War Veterans. Since all CW's are based on insecticides, and there were many exposures to flea collars, misting units in the base camps, cans of DDT, many other types of bug spray bought in the are of operations and many of them do not conform to American standards for exposure, the symptoms seem to have a clear link to all of the above.

Why is the DOD/Army failing to release the names of the veterans who were used in the test from 1955 thru 1975 after 30 years since the end of the tests? Is it the fact that many of these veterans suffer disabilities resulting from the exposures to CW's and if the service connect these 7120 men, then they are opening the door to the Gulf War vets to be service connected for similar health conditions?

I realize the numbers are ugly at face value, of the 7120 men used at Edgewood 40% are dead before age 65, and 54% of the 4022 survivors are in very poor or totally disabling health, approximately 2200 men. The cost of service connecting 7120 men is miniscule, compared to opening the door for 100-200,000 veterans, with disability rates as these for pulmonary and cardiac and gastrointestinal problems could and would into unknow

billions of dollars of liabilty for the government.

If you are going to give a war, and expect men and women to volunteer, then when they are hurt or suffer damages the government should be willing to accept responsibility for the damages caused by the action. Not to do incomplete health studies and refuse to address known medical issues. These menand women served honrably and they deserve honorable treatment from their government, not to give it will serioulsy affect this nations ability to field a compltere fighting force in the future. When new generations of Americans realize that their government does not care about them, who will volunteer?

Michael G Bailey
[redacted]
West Columbia SC [redacted]

I am an army veteran who enlisted in October 1973, I was at Edgewood for the tests from June 25 thru 22 August 1974, I served on active duty until September 1982 when I left the service as a Staff Sergeant. I re-enlisted in the Georgia Army National Guard in September 1988 and asked for a transfer to the 48th Brigade when they were activated for duty in the Gulf War, I was deployed to Oman, Khasab Air Force Base on the Persian Gulf. I suffered a series of TIA's and a stroke within 12 months of discharge, at the age of 36, in February 1994 I suffered the first of 7 heart attacks, in February 1997 I underwent triple bypass surgery at the age of 41, I have since been disabled by SSD for heart disease, COPD, PTSD, skin abnormalities that the VA doctors can not diagnose after biopsies, emphysema and sexual dysfunction, all of them are listed in the VA manual as being caused by exposure to Chemical Weapons. The VA has so far denied all claims expect for PTSD since I had proof that 7 fellow soldiers beat me unconcious and robbed me in Fort Wainwright Alaksa in Feb 1975, 4 of them were sentenced to Leavenworth Prison after general court martials. They refuse to address the medical problems related to Edgewood Arsenal. I still have appeals pending, I am in my 4th year of dealing with the VA. I had ignored it until I became totally disabled at age 45, I didn;t want anything from the government, I had a decent job at the Post Office until my life totally disintergrated in May 2000.

[redacted]

From: Tom Reilly [redacted]
Sent: Monday, November 07, 2005 9:56 AM
To: [redacted]
Subject: als

i am a vietnam vet with als , pls try to convince the govt to take care of our vets,

tom reilly
past commander american legion post 1009

[redacted]

From: Anita Bajoraitis [redacted]
Sent: Monday, November 07, 2005 1:50 PM
To: [redacted]
Subject: Shay committee hearings - Gulf War

Our granddaughter's husband, Sean Reddecliffe, served in the Gulf War and is in the last stages of Lou Gehrig's disease. He is 38 years old. Our granddaughter is caring for him at home in Seattle and obviously had to quit her job in order to provide 24 hour care. Although it took a considerable amount of time, the VA finally accepted his claim. Without the support they have received from VA, they would now be financially bankrupt.

We urge the House to pass Rep. Shay's proposed amendment to the 2006 Defense Appropriations Bill so that additional veterans who suffer from service related aliments can receive the care they deserve for serving our country.

Anita & Rim Bajoraitis
[redacted]
Federal Way WA [redacted]
--
Internal Virus Database is out-of-date.
Checked by AVG Free Edition.
Version: 7.1.362 / Virus Database: 267.12.5/150 - Release Date: 10/27/2005

[redacted]

From: Carl Musgrove [redacted]
Sent: Sunday, November 06, 2005 3:11 AM
To: [redacted]
Subject: Another coincidence Gulf War Journalist with Parkinsons.

Carl Musgrove (Gulf War Veteran with Parkinson's disease) Wiltshire UK Tel UK 01380 720655

Websites:- http://mysite.wanadoo-members.co.uk/coalitionforcegwi
http://mysite.wanadoo-members.co.uk/militaryparkinsons

Dear Sirs / Mams

I have drafted the Appendix below for my submission to the US Congress hearing on Gulf War Illness on the 15th November.

Yours faithfully

CJ Musgrove

DRAFT APPENDIX

Another coincidence - Gulf War Journalist with Parkinson's.

One Friday afternoon in early November 2005, I was sitting wearily in front of my PC at the end of week's teaching having just dismissed 30 excitable children and half heartedly making small talk to the cleaner. I was doing some internet research into military sufferers of Parkinson's disease particularly those who served in the 1991 Gulf War. Another "coincidence" was flickering on my rather decrepit computer screen.

"The latest production from award-winning Belfast company, DoubleBand Films,
is to be broadcast at 9pm on Thursday 19 August 2004 on Channel Four. Produced by Diarmuid Lavery and directed by Michael Hewitt, the documentary follows the dramatic story of journalist David Beresford, who suffered the first symptoms of Parkinson's Disease while covering the Gulf War of 1991. As it progressed, the disease left David with severe tremors, difficulty in walking and he became increasingly confined to his house. Desperate for treatment, after several years David discovered a pioneering operation being
developed by surgeons in France. A brain operation that would last up to eighteen hours - and for which he would have to remain conscious. "

David Beresford, now 58 years old, lives in South Africa, and wrote for The Guardian and the Observer, both reputable British newspapers. David wrote that "the conduct of war is familiar to me, because I am a former war

correspondent. It was during the imbroglio in the Gulf, in 1991, which I prefer to describe as a virtual reality event, that my personal war began, although I did not recognise it at the time. It started while I was sitting in the back of a Land Cruiser, scribbling a story on the liberation of Kuwait as we hurried across the sands to the
telephones of Saudi Arabia and London, when I exclaimed half to myself, half
to my companions:
'That's strange, my handwriting's gone funny.'"
http://www.martinpurchase.org.uk/downloads/PDFS/observerpd.pdf There is nothing noteworthy in that paragraph, as I have spoken to several Gulf War Veterans who believe that their first Parkinson symptom occurred during, or soon after, the 1991 Gulf War.

David's period of neurological weirdness, the time lag between the emergence
of the first symptom and diagnosis, seems much shorter than the sufferers I have met. Perhaps his disease is more aggressive or perhaps he enjoyed more thorough scrutiny at the National Hospital for Nervous Diseases, Queen Square, London, than your ordinary citizen, and he was diagnosed about a year later. For many veterans this period typically lasts for eight or nine years. It is characterised by confusion, misdiagnosis by doctors, denial, rational procrastination, humiliation, anger and increasing apprehension. It
may result in relationship, social and employment problems.

When David wrote the following in 2002, he apparently did not understand the
extent of the links between the Gulf War and of his illness. "Pesticides - as a foreign correspondent, that was enough to fuel my imagination. The coincidence that my first symptom - cramped handwriting - appeared while I was covering the 1991 conflict in the Middle East offered a pointer to "Gulf
War syndrome". The discovery that South African military intelligence had me
under surveillance at a time when they were poisoning critics with organophosphates offered another line of speculation. Both seem to fall on the absence of any undue incidence of shuffling and shaking among my Gulf colleagues, or in the anti-apartheid community. "
http://www.guardian.co.uk/health/story/0,,773520,00.html#article_continue
Like all of us he was isolated from other veterans of the Gulf War with Parkinson's. Presumably he accepted like many of us that we were simply unfortunate. What is surprising in his case is that he has not pieced together the evidence, even with all the investigative powers of a national newspaper behind him.

What chance has an ordinary soldier got of making sense of it all ?

[redacted]

From: Ates, Sandy K. Civ [redacted]
Sent: Thursday, November 03, 2005 1:28 PM
To: [redacted]
Cc: [redacted]
Subject: Committee on Government Reform Testimony

Committee on Government Reform
Subcommittee on National Security, Emerging Threats, and International Relations
Room #2154 Rayburn House Office Building
Time – 10:00 am
Titled – Examining VA Implementation of the Persian Gulf War Veterans Act of 1998

RE: Testimony of Sandra K. Ates, Master Sergeant (Retired) Mississippi Air National Guard

Dear Committee Members,

I am forwarding this testimony and short biography to become part of the Congressional Record in support of the National Gulf War Resource Center (NGWRC).

TESTIMONY:

I, Sandra K. Ates, a 29-year veteran of the United States Air Force and Mississippi Army and Air National Guard, retired from service with the Air National Guard June 27, 2004, when physical and medical conditions could no longer support being a deployable asset and servant to my country. I went from being a very healthy, active person, to now, being a very unhealthy person.

My first obvious incident of medical problems began on September 10, 2003. I awoke about 4:30 a.m., dressed and was starting out the door at 6:00 a.m. to go to my job with the military department when I began coughing and choking. I went to the kitchen sink and began coughing up blood and large blood clots, for no apparent reason. I was not ill, running a fever or suffering from any known disease. Living alone, I drove myself to a hospital 45 minutes away in Jackson, Mississippi. In the emergency room at the Baptist Medical Center, technicians took x-rays to determine if I had Tuberculosis. I did not have TB, and for the most part, the doctors could not determine why I began coughing blood/clots, and referred me to an Ear/Nose/Throat specialist.

Approximately two weeks later, I saw the ENT physician. Tests, more x-rays and examination by the physician indicated grossly enlarged sinus tubinates and deviated septum, but according to the doctor, there was no reason for me to exhibit the blood/clotting. He referred me to a pulmonologist.

On my first visit the pulmonologist completed an exam and MRI, and determining I had COPD, of which I had never been diagnosed previously. Thankfully, I had lived past blood clots to the lungs. On the next visit, the pulmonologist performed a bronchioscopy, by which time I had developed severe pneumonia. Results indicated "dust particles" and scarring in various areas of my lungs.

In October 2003, I made a claim with the VA to upgrade a previous 0 percent service connection (SC) for a back injury incurred in a government vehicle while serving with the U.S. Air Force in early 1970, since the condition had worsened. At the same time, I made a claim (SC) for respiratory problems since

it happened while I was serving with the Mississippi Air National Guard. After another airman in my unit had developed the same condition with the blood/clots, I was convinced that something had happened while on active duty in Kuwait in mid-2001. Since other soldiers, airman, marines and navy personnel were having "strange" problems with blood clots according to media reports. I had also noticed that I had developed daily headaches, sleeplessness, and manic depression (as diagnosed by my civilian primary care doctor which was shortly before the onset of the blood/clots) and filed for these conditions, none of which I had ever been treated.

I received an upgrade of 10% on my 0 percent SC, and the VA Regional Office denied all other conditions for SC, even though I was still undergoing Compensation and Pension examinations at the VA Medical Center in Jackson. It was during further C&P exams the Jackson VA Medical Center for problems with headaches that an MRI determined possible Multiple Sclerosis. A further lumbar puncture resulted in the VA diagnosis of Multiple Sclerosis.

In essence, I had been denied on all the symptoms of MS, of which I had never been diagnosed with previously, as well as respiratory and lung problems, which more than likely were due to autoimmune disease/MS.

I began my long process with the VARO and VAMC in October 2003, it is currently November 2005, and I am still waiting on the VA to make a determination of service connection. Within a short period, approximately 2 years, I had gone from a very proud, healthy service member to a very ill service member.

I served my country voluntarily for all those years, proud to be of service, and had planned to retire from the National Guard at age 60. At the age of 52, however, I voluntarily retired, (June 2004), because I could no longer meet military standards. I was ill everyday, and the burden of the conditions I suffered indirectly caused dissolution of my marriage in 2004. I am now alone; I lost quality in every aspect of my life. Whether ill or not, I must support myself, which is a very difficult task indeed.

I am not the only service member suffering, thousands more suffer also. It is imperative that our ill veterans receive the same dedicated care by our country, as its service members have given to its country.

Thank You,

MSgt. (Ret.) Sandra K. Ates
[redacted]
Edwards, Mississippi [redacted]
[redacted]

Biographical

Born Sandra K. Phillips, August 28, 1952, Mitchell, South Dakota.

11/14/2005

Education
Graduate Mitchell Senior High School, May 1970.
Graduate Community College of the Air Force, 2004
Attended Hinds Community College, 1980-1982
Attended William Carey College, 1985-1989

Military Education
Basic Training, Lackland AFB, San Antonio, TX 1972
Technical Training, Administrative Specialist, Keesler AFB, Biloxi, MS 1973
Technical Training, Illustrator, Lowry AFB, Denver, CO, 1982
Basic NCO School, BNCO, Camp Shelby, MS 1984
Advanced NCO School, ANCO, Camp Shelby, MS 1986
Technical Training, Journalism Basic, Ft. Benjamin Harrison, Indianapolis, IN 1985
Technical Training, Journalism Senior, Ft. Meade, Baltimore, MD, 2002
USAF NCO Academy, 2001

Military Service
October 1972, Enlisted in the U.S. Air Force
March 1973 – October 1976, Bitburg AFB, Germany
Sept. 1978 – April 1980, 186th Air Refueling Wing, MS ANG, Meridian, MS
April 1980 – October 1982, 31st Rear Area Operations Center, MS ARNG, Jackson, MS
October 1982 – September 1995, Headquarters, State Area Command, MS ARNG, Jackson, MS
September 1995 – June 2004, 172nd Airlift Wing, MS ANG, Jackson, MS
June 27, 2004, Retired from the Mississippi Air National Guard

Civilian Employment
1982 – Present: Mississippi National Guard, Joint Force Headquarters, Media Coordinator, Jackson, MS

Affiliations
Member, Mississippi National Guard NCO Association
DAV (Disabled American Veterans)
MSVETS (Multiple Sclerosis Veterans Online)
PAV (Paralyzed American Veterans)

McElroy, Kristine

From: [redacted]
Sent: Wednesday, November 02, 2005 10:37 AM
To: [redacted]
Subject: November 15 hearing

Chris, Larry and Christine: My comments - testimony for the upcoming November
15 hearing on Gulf War illness is attached. Please read distribute this to all committee members and include in the hearing record.
I also request that Denise Nichols be included in the list of presenters.
If you have any questions pleasse [redacted]

thank you,

Doug Rokke, Ph.D.
[redacted]
Rantoul, Ilinois [redacted]
[redacted]

[redacted]

From: [redacted]
Sent: Wednesday, November 02, 2005 11:22 AM
To: [redacted]
Subject: Re: November 15 hearing

Kristine - Sorry -I just resent it- it would not go before until I rebooted my computer. Someplace in your files you should have the full report on Depleted uranium with thorough unclassified documentation that Denise I and prepared
for your committee back in March 2001. Christopher / Bob Newman had us give that report in both oral, about 3- 4 hours duration, in your office conference
room to Beth Clay and Tom Bowman and also provide the annotated report in full
writen form. If you do not have a copy stil there Denise has copies still. I have thousands of pages of unclassified work on this issue since day 1. This has been and continues to be a nightmare- day in and day out I get calls for
help from abandoned vets and family members seeking help.

Thank you,
doug rokke
[redacted]

a copy of an original actual army report as background on myself/ my team follows:

Bauer's Raiders: Preparing Medical Personnel for War

Captain (Dr.) Doug Rokke
Fall 1992
330th Medical Brigade, U.S. Army Reserve

The preparations for war take many forms. Infantry soldiers learn and practice their combat skills, truck drivers practice maneuvering their rigs to
make sure they can deliver supplies, and medical personnel prepare to treat the
expected combat casualties. In many cases the selected preparations are driven by intelligence reports. Prior to the start of Operation Desert Storm
military intelligence reports and threats issued by President Saddam Hussein
suggested that the potential existed for use of nuclear, biological, and chemical
(NBC) chemicals.
As we prepared for the battle in the Deserts of Saudi Arabia, Kuwait, and
Iraq, Col. D.G. Tsoulos, Commander 3d U.S. Army Medical Command and other unit commanders recognized the need to ensure that their personnel could provide

adequate emergency medical care to conserve the fighting strength in an NBC environment. This need required an assessment of medical capabilities. Four areas were identified in which additional training was needed.

Identification of Training Needs

First, an assessment of emergency medical response capabilities in the staging areas located within Saudi Arabia indicated the need to develop and implement a plan to respond to medical emergencies resulting from combat or disease and non-battle injuries (DNBI). Second, an assessment of medical personnel arriving in Southwest Asia indicated that many medical personnel did not have the knowledge, skills, and attitudes needed to provide medical care for the expected nuclear, biological, and chemical (NBC) warfare casualties. Third, the need to provide a NBC defense refresher course for operations personnel that was designed specifically for the expected NBC problems in the Persian Gulf was identified. Fourth, the need to design and construct decontamination facilities, prepare standard operating procedures, and train personnel to provide decontamination was identified. In order to provide the identified training a special operations team was authorized.

Bauer's Raiders

Consequently, Bauer's Raiders, the 3d U.S. Army Medical Command theater nuclear, biological, and chemical warfare special operations planning and teaching team was formed. Bauer's Raiders was led by COL (Dr.) Ulrich Bauer, currently 42d Division surgeon. The other members included COL.(Dr.)Andras Korényi-Both, a physician; COL. (Dr.) Thomas Little, a physician; LTC (Dr.) Harry Ellis, a toxicologist; Major John Shanks, a registered nurse; CPT (Dr.) Doug Rokke, a technology educator and physicist; CPT (RET) Charles Blisset, an engineer; MSG Charles Fails, 3rd U.S. Medical Command NBC Operations Section Chief; and SFC Rolla Dolph, a combat medic and NBC operations sergeant. Each team member had prior combat experience and was a qualified medical and NBC instructor.

The first priority was to provide emergency medical care for units as they arrived and prepared for combat in echelon above corps areas near Riyadh, Saudi Arabia. In response, Bauer's Raiders developed and implemented an emergency medical response force at Eskan Village and in the vicinity of Riyadh. Civilian emergency medical personnel who were now on active duty and active component counterparts were identified and emergency medical sites were identified, supplied, and staffed to ensure rapid delivery of emergency medical care.

The second priority was to develop and provide the identified training.

The training covered four areas. Bauer's Raiders developed and taught the Operation Desert Storm combat lifesaver short course; the medical management of chemical, and biological casualties course (a modified Aberdeen Proving Grounds course); and the Operation Desert Storm NBC defense/ 54B refresher course. They developed standard operating procedures for decontamination of and treatment of NBC casualties. This team also designed and supervised the construction of the NBC decontamination facilities and provided operations assistance throughout the echelons above corps, corps, and coalition forces.

Combat Lifesaver Course

The Desert Storm combat lifesaver course was designed around the standard emergency medical technician refresher course approved by the American College of Orthopedic Surgeons and Department of Transportation. The objective was to provide non-medical personnel with the skills necessary to sustain life until advanced medical care could be obtained. U.S. Army and U.S. Air Force personnel stationed in the vicinity of Riyadh, Damaam, King Kahlid Military City, and along the Tap Line Road completed the course. Mission and time constraints necessitated that the course length not exceed one duty day. Consequently, instruction focused on essential emergency medical skills. An introduction to intravenous therapy and emergency first aid related specifically to problems in Southwest Asia were also included. After action reports indicate that seven out of ten casualties were initially treated by soldiers who had completed the combat lifesaver course.

Medical Management of Chemical and Biological Combat Casualties Course

The medical management of chemical, and biological casualties course (M2 C3) was based on the course taught at Aberdeen Proving Grounds. The course consisted of a theater specific threat briefing; discussion of the signs, symptoms, and consequences of chemical and biological agents; an overview of decontamination procedures; and an in depth discussion of emergency medical care procedures. Over 800 medical personnel completed the ten hour course prior to initiation of the ground war phase of Operation Desert Storm.

NBC Refresher Course

The 54B / NBC defense refresher course was modeled after the course

developed by the 5035th USARF school and 4th U.S. Army Readiness Group. The sixteen hour course consisted of an introduction to projected Operation Desert Storm NBC tasks; a theater specific threat briefing; anatomy and physiology; detection; NBC reporting procedures; decontamination; sustainment training; equipment maintenance; NBC supplies; development, distribution, and use of standard operating procedures; questions and answers; and a summary. Approximately 100 NBC operations personnel assigned to the 3d U.S. Army Medical Command (MEDCOM), 3d U.S. Army Personnel Command (PERSCOM), and the U.S. Central Command (CENTCOM) completed the refresher course.

Decontamination

The need to ensure adequate decontamination resulted in the development of a standard operations procedure (enclosed) consisting of an introduction and sections on (a) medical support in chemical operations, (b) planning for the management and treatment of contaminated casualties, (c) site selection, (d) identification of decontamination supplies (medical and non-medical), (e) specific decontamination procedures, and (f) fabrication of the decontamination stretcher. The objective of this SOP was to provide medical personnel with the guidance needed to complete gross decontamination and provide emergency medical stabilization of NBC casualties. Over 1200 medical personnel were trained and certified to staff NBC decontamination stations prior to the initiation of the ground phase of Operation Desert Storm.

Impacts

The training programs developed and taught by Bauer's Raiders contributed to the success of Operation Desert Storm. While many military training programs are not discussed over the civilian and military radio system, the NBC training programs were discussed and many individuals decided to attend the courses as a result of the press releases that were distributed and interviews that were conducted and broadcast by the Armed Forces Radio Network. Some command personnel think that one factor that influenced Iraq not to utilize chemical and biological weapons was the readiness of U. S. military personnel to operate in and provide the necessary medical care in an NBC environment.

Since the end of the Persian Gulf War, Bauer's Raiders and trained medical personnel have trained additional military personnel and many civilian

medical, fire, and police personnel. Feedback from U.S. Army, U.S. Air Force, and
civilian emergency response personnel obtained during training conferences indicate that the knowledge and skills that were acquired have been beneficial in
improving civilian and military emergency response during hazardous materials
incidents.

Conclusion

The most important lesson to be learned is that specific training needed
to sustain the fighting force must be developed and implemented to meet combat
and non-combat needs during any military operation and that this knowledge is
useful in military and civilian incidents.

and from OSAGWI files even though Mike kilpatrick will not admit I / we exist
or that we did the work.

ARCENT MEDCOM MED MANAGEMENT OF COMBAT CHEM AND BIO CASUALTI

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ARCENT MEDCOM MEDICAL 14ANAGEMENT OF COMBAT
CHEMICAL AND BIOLOGICAL CASUALTIES

0830-0845,	I.	INTRODUCTION COURSE OVERVIEW STAFF INTRODUCTION	LTC BAUER
0845-0935	II.	NBC OVERVIEW	1LT ROKKE
0935-0945	III.	COFFEE BREAK	
0945-1115	IV.	THE PHYSIOLOGICAL EFFECTS OF NBC AGENTS	LTC ELLIS
1115-1205	V.	NBC CASUALTY DECONTAMINATION	SSG DOLPH
1205-1300	VI.	LUNCH	
1300-1430	VII.	THE EMERGENCY MEDICAL CARE AND TREATMENT OF NBC CASUALTIES	LTC BAUER
1430-1500	VIII.	QUESTIONS AND ANSWERS	STAFF
1500-1515	IX.	SUM14ARY	LTC BAUER

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Permanent Referral = 01-JAN-1980
Non-Health Related Document = 01-JAN-1980
Declassified = 11-OCT-1996

[redacted]

From: Keith Reimers [redacted]
Sent: Wednesday, November 09, 2005 8:52 AM
To: [redacted]
Subject: Testimony for the Record-11-15-05 Shays Hearings on PGW Veterans Illness

Hello Ms McElroy:

I was told to forward you testimony that I would like entered into the record for the November 15, 2005 Shays Committee Hearings on Persian Gulf War veterans illnesses. I am not able to attend in person but would like my
testimony added to the record. Can you confirm receipt of this so I know it
has been entered? Thank you for your time and consideration. Regards, Keith
Reimers.

TESTIMONY:

Shay Committee Congressional Hearings on Persian Gulf War veteran's illnesses
November 15, 2005

Testimony from Persian Gulf War Veteran
Keith G. Reimers
1[redacted]t
North Tonawanda, NY [redacted]0
[redacted]

Submitted via e-mail to: [redacted] on 11-9-05 to be added to the record.

Mr. Chairman and members of the committee, I would to thank you for the opportunity to submit my written testimony, which will be made part of the "official" record, about illnesses Persian Gulf War veterans are suffering from. I am hopeful that my testimony will be read and used when the committee makes decisions that will affect all Persian Gulf War veterans and
their families.

I served in the U.S. Air Force in Command and Control. I also volunteered for additional duties while deployed in the war. I was a Airbase Ground Defense Augmentee. We were trained on M-16 weapon use, Light Armored Rocket
(LAR) use, and night vision use to spot and deter threats to U.S. military assets and allied assets such as equipment, troops, and facilities. We performed perimeter patrols on foot and protected personnel and assets on base. I served in the United Arab Emirates, Saudi Arabia, and Kuwait from October 1990 to May 1991. As many other military personnel, I received numerous injections prior to deployment and while deployed and was ordered

to take the anti-nerve agent pills while deployed. I was also exposed to things such as the oil well fires, heavy amounts of pesticides/insecticides, airplane fumes and fuel, I handled shell fragments from our bombs with my bare hands, and was exposed to all of the "unknowns" such as chemical and biological weapons. I have read the reports that have stated that the U.S. government did not expose the U.S. troops to "excessive" amounts of pesticides. One thing that is NEVER mentioned or discussed is that U.S. troops were also exposed to the pesticides that our host country troops used in and around the facilities we lived in and worked. Specifically, I can remember vividly that at our base in the United Arab Emirates, the 1650th TAWP, (Sharjah) was sprayed by the host country troops to control the infestation of insects. The spray was very HEAVY and THICK in "tent city" and the areas where we worked, lived and ate. These pesticides were sprayed OFTEN and in large quantities. It was sprayed around our tents, in our tents, on our equipment, and I am certain it was on our clothing, food, water, showers, etc, etc. The pesticides they would spray "hovered" for what seemed like minutes before settling on everything. Again, this was sprayed IN ADDITION to what the U.S. troops used to control the pests that plagued us. This MUST be taken into consideration and is CRITICAL to the total exposures we encountered.

When I entered the military I was a very healthy and athletic young man. I was active in just about every sport and recreational activity. I took pride in my physical condition and my abilities. I had NO illnesses or injuries.

After returning from the war I tried to get on with my life. I was proud of what we did in the war and how we did it. My unit was decorated for our actions with "Valor" and I was presented with an Achievement Medal for my service in the war. Approximately a year after returning home from the war I began having strange, unexplained problems. Specifically, severe fatigue, muscle pain and stiffness, numbness, tremor and other neurological symptoms.

I attempted to ignore these problems until I could no longer do so. I sought help and treatment. Tests were performed and no physician could come up with a diagnosis. My symptoms were being treated but not a diagnosed condition. In 2000, things had progressed to the point where my symptoms were very obvious and I could no longer carry on with life comfortably. We sought the treatment of a well respected neurologist. After his exam and testing and after a second opinion from another leading neurologist I was "officially" diagnosed with Parkinson's disease in 2001 at age 32, (although the diagnosis was suspected in 2000). Needless to say, I felt as if my life had just ended. I was sad, confused, and angry. I have absolutely NO family history of any neurological diseases. After the shock of my diagnosis settled in I began trying to learn about my disease and the possible causes. I was shocked to read some of the research that was done on Gulf War illness. What surprised me the most was that Parkinson's

disease was mentioned often as a possible outcome for those veterans who served in the Persian Gulf War. Specifically, I found great interest in research by Dr. Robert Haley, Chief of Epidemiology at the University of Texas Southwestern Medical Center in Dallas. Dr. Haley has said brain scans
of veterans show loss of cells or cellular function in the left and right basal ganglia and the brain stem. The basal ganglia are walnut sized structures on either side of the brain stem, the connection between the brain and spinal cord. All three structures are involved in memory, emotions and usually-automatic processes such as balance and muscle control.

Dr. Haley said the damage is similar to that seen in the early stages of Huntington's and Parkinson's disease. Dr. James L. Fleckenstein, Professor
of Radiology at the University of Texas Southwestern Medical Center in Dallas was also involved in this research and concurs with Dr. Haley. In Dr. Haley's early research he also found that a brain chemical called dopamine was also altered. Dr. Haley, has even stated that he believes that based on the type of brain damage and abnormal levels of dopamine, Persian Gulf War veterans will develop Parkinson's disease about 10 years or
so after leaving the Persian Gulf. I found it odd and shocking that I was diagnosed 10 years after leaving the Persian Gulf War theater of operations,
just as Dr. Haley had predicted.

I also found that Department of Veterans (D.V.A.) Secretary, Anthony Principi, used research from Dr. Haley when the D.V.A. made the decision to automatically service-connect Amyotrophic Lateral Sclerosis (ALS-Lou Gehrig's disease) to service in the Persian Gulf War if a veteran is diagnosed with ALS anytime in their life. What continues to confuse me is why the D.V.A. ignores Dr. Haley's research on the brain damage Persian Gulf
War veterans have suffered, such as the damaged basal ganglias and altered dopamine and the neurological affects of this damage. This damage is EXACTLY what happens in Parkinson's disease. Dr. Haley is supported by a number of researchers on this work as well. Furthermore, a November 12, 2004 article by Suzanne Gamboda states "Principi's panel found that more recent studies suggest the veterans' illnesses are neurological and apparently are linked to exposure to neurotoxins such as the nerve gas sarin, the anti-nerve has drug pyridostigmine bromide and pesticides that affect the nervous system". Also, a November 28, 2004 article by Vicki Brower states "Department of Veterans Affairs (DVA) made a 180-degree turnaround by publicly acknowledging that strong evidence exists that many GWI veterans are suffering from brain damage caused by different combinations of exposure to toxins". Please note that both these articles are a reference to the research by Dr. Haley.

I believe Dr. Haley's research on the changes in the basal ganglia and altered dopamine is very compelling. Those with Parkinson's disease have the exact same damage in their brains and as suggested by Dr. Haley could lead to Persian Gulf War veterans being diagnosed with Parkinson's disease. Through my own research on the internet I have found many other veteran's of
the Persian Gulf War who have been diagnosed with Parkinson's disease.

This
includes U.S., British, Australian, and Canadian troops. And just
recently,
I learned that a British journalist, who was in the war covering the
troops,
has been diagnosed with Parkinson's disease as well.

I am requesting that additional funds be appropriated for research into linking Parkinson's disease to service in the 1990/1991 Persian Gulf War. My diagnosis of Parkinson's disease is not an isolated incident. And it is not normal for a 32 year old to be diagnosed Parkinson's disease. Furthermore, I am requesting that Parkinson's disease be added to Title 38 USC and Title 38 CFR as a "Presumptive" condition for service connection for
those who served in the Persian Gulf War just like Amyotrophic Lateral Sclerosis (ALS) was added by D.V.A. Secretary Anthony Principi. Service-connection for my Parkinson's disease would mean I could receive the
treatment, medications, and future surgeries I will require. It will provide financial support for me and my family as we face this long, painful, and uncertain struggle with a chronic progressive/degenerative neurological disease. I sincerely believe my Parkinson's disease is a result of the various exposures we encountered during the war. I feel this has already been supported by people like Dr. Robert Haley.

I do not know my future. What I know is that my disease continues to worsen
and I become trapped in a body that does not function normally. I live my life from dose to dose of the medications I require to control the symptoms of the disease. That said, the medications will only work for so long which
is the nature of this disease. I have accepted my diagnosis and I am well aware there is no cure for this disease and there is no way to stop it. I am no longer the man I used to be because of Parkinson's disease. I have gone from the physically fit athlete and the one others could count on for help when in need, to the one who requires the assistance of my wife to do simple things. I still get sad when I think about the future. Having said that, I am very proud of what the U.S. military did in the Persian Gulf War and my contribution in the war. The experience taught me a lot about myself
and I am grateful to have had the opportunity to serve this great country. Thank you for your valuable time and consideration

[redacted]

From: Vargha, Steve [redacted]
Sent: Monday, November 07, 2005 1:01 PM
To: [redacted]
Subject: Vets Hearing

Good afternoon.

I am looking for North Carolina Gulf War vets (particularly from Raleigh, Durham, Fayetteville and nearby communities) who have signed up to testify for the November 15th hearings. Can you help me out with names and contact information? I would like to preview this Congressional hearing this weekend thus I need the information as soon as possible. Thanks for your help! :)

Steve Vargha

Assignment Editor

WTVD-TV/ABC, Incorporated

411 Liberty Street

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[redacted]

Christopher Shays, Kristine Fiorentino, and Larry Halloren : Although I am unable to attend to hearing on November 15 I wish to submit the following comments for the record. The issue of "Gulf War Illness" has remained unresolved for 15 years. During Gulf War 1 we identified numerous "exposures' with immediate, anticipated, and observed adverse health and environmental effects. These have affected U.S, coalition, and Iraqi military personnel and civilians. Years Ago I / we prepared a summary of verified and probable "exposures" These are as follow:

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Gulf War I exposure summary. Prepared by Dr. Doug Rokke, Ph.D., Major, MS, USAR

1. Chemical agents- The deliberate destruction of over 100 Iraqi bunkers containing chemical warfare agents caused a release of the following nerve agents: sarin, cyclo-sarin, tabun, soman, VX, multiple seven, and novachuks. Each of these possesses anticholinergic properties and when combined or used as individual agents can result in varying degrees of immediate and delayed nicotinic and muscartinic effects. Reactions do not need to be acute but can be sub-clinical and delayed until thresholds are reached by combination with other fat or even water soluable nerve agents. For example, one specific exposure occurred when a facility known as Kamasiah was destroyed. It is important to understand that chemical agent alarms designed and set up to detect releases and exposures to nerve agents were going of all the time all over the theater during the air and ground war campaigns. Known releases of nerve agents were documented as late as May and into June 1991. DOD officials still attempt to discount these releases and detections by claiming they were false alarms. They were not false but actual detections as we verified at the time.

2. Immunizations- Immunizations were administered without concern for combined reactions nor concern for immunization scheduling. These included: Anthrax, Botulinum toxin, flu, GG, and standard immunizations for region. In almost all cases, doses, batch number, lot number, and adverse reactions were not reported by directive. Immunizations were not recorded on shot records. The anthrax vaccine was delivered into theater and distributed within theater without any required temperature control. Anthrax vaccines were administered without recording lot numbers, batch numbers, reactions, or even who received how much and when by direct order. We observed and had adverse reactions reported in well over 60% of those who received the anthrax vaccine but this was not reported by direct order. Congressional investigations and chemical analysis have verified that the illegal adjutvant squalene was used in the anthrax vaccine to extend dose availability (Metcalf Report on potential Role of Squalene in Gulf War illnesses- prepared by the Office of Congressman Jack Metcalf September 27, 2000).

3. Radiological materials- The primary source of radioactive material exposure was the use and distribution of depleted uranium munitions which are simply solid uranium 238. Another source was the willful destruction of Iraqi reactors and facilities

containing other radioactive materials. Destroyed and operational equipment also contained an entire range of radioactive materials.

4. Endemic diseases- These included diseases prevalent within Saudi Arabia, Iraq, and Kuwait and those brought in by personnel from all the nations involved in the military or relief operations. Observed problems included GI, URI, rashes, and fevers to mention only a few. Careful assessment and reference to public health references should be completed during any assessment and treatment program.

5. Hazardous materials- Hazardous materials consisting of organic and inorganic compounds were used throughout the theater from initial deployment until the present. Exposures have occurred since the beginning with adverse health effects observed and reported at all times. Activities resulted in spills and releases and consequent inhalation or absorption of these compounds. Individual adverse health effects from hazardous materials exposures did and will depend on the compound and route of exposure. (Refer to USACHPPM TG 230A, May 1999)

6. Pesticides- Pesticides were completely misused. As we prepared for deployment, public health concerns regarding health threats from endemic and imported pests was recognized. Consequently pesticides were ordered and use was planned. As a consequence of combat actions and limited transportation assets most of the requested and approved pesticides did not arrive in theater. Therefore, preventive medicine personnel assigned to the 12th PM and other units purchased pesticides from local sources then used these pesticides which were of unknown quality in addition to those pesticides acquired from the Department of Army supply system.. These pesticides were applied without concern for exposure doses and combined effects. A recent report prepared and released by OSAGWI (www.gulflink.osd.mil) recognizes and discusses some of the health problems but this report is still incomplete because DOD officials did not talk to those of us involved and did not consider all of our reports. MANY INDIVIDUALS WERE EXPOSED TO PESTICIDES WHICH WERE MISUSED BY UNTRAINED AND TRAINED PERSONNEL!!! We observed and received numerous reports of adverse health effects from pesticide exposures. Consequently neurological problems have been observed and must be considered during any physiological examination and treatment program. I would also include PB tablets (mestinone) in this category as they are carbamate related compound and caused adverse health effects in well over 50% who took these tablets as cited in Army handbook: "Medical Management of Chemical Casualties".

7. Biological agents- Iraq was known to possess various biological agents. One agent Bacillus Globigii is known to cause GI problems. We suspect based on observed problems and intelligence reports that this agent was probably released. I had one unit 822 MP that came down with severe GI problems within 24 hours. The only explanation based on discussions with unit members and intelligence information analysis was some type of unknown biological exposure. Other biological agents were related to water and food borne illnesses. Local food purchases and use of food that was grown in night soil (human waste etc.) occurred. Consequently GI problems

were observed throughout the theater in thousands of individuals. Water borne problems from oil well combustion byproduct and chemical agent distribution were also observed and reported throughout the theater. We were also unable because of political problems to ensure that food handlers passed physical and public health exams and employment criteria such as common within the U.S. Consequently we saw food borne problems and suspect that deliberate contamination may have occurred which could explain some observed adverse problems.

8. Oil well fires- The deliberate burning of the oil wells resulted in immediate adverse health effects. Oil well byproducts were complex and consisted of (per OSAGWI Oil Well Fire report, September 2000 see www.gulflink.osd.mil):

Table 9. Mean and maximum concentrations of pollutants of concern, May-December 1991[182]

Pollutant	Mean Concentration	Maximum Concentration	NAAQS(1)	ACGIH TLVs(6)
Criteria Pollutants				
Ozone	53.4 m g/m^3	104.8 m g/m^3	160 m g/m^3(2)	100 m g/m^3
Sulfur dioxide	23.8 m g/m^3	92.5 m g/m^3	80 m g/m^3(3)	5,200 m g/m^3
Nitrogen dioxide	58.5 m g/m^3	86.1 m g/m^3	100 m g/m^3(3)	5,600 m g/m^3
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene	0.62 ng/m^3	2.25 ng/m^3		200,000 ng/m^3
Benzo-anthracene	0.60 ng/m^3	2.23 ng/m^3		200,000 ng/m^3
Biphenyl	7.2 ng/m^3	19.07 ng/m^3		200,000 ng/m^3
Chrysene	0.48 ng/m^3	2.25 ng/m^3		200,000 ng/m^3
Fluoranthene	1.41 ng/m^3	2.23 ng/m^3		200,000 ng/m^3
Phenanthrene	0.48 ng/m^3	1.84 ng/m^3		200,000 ng/m^3
Pyrene	0.65 ng/m^3	3.5 ng/m^3		200,000 ng/m^3
Particulates	354 m g/m^3	3,000 m g/m^3	150 m g/m^3(4)	300,000 m g/m^3
Metals				
Cadmium	0.003 m g/m^3	0.0078 m g/m^3		10 m g/m^3
Chromium	0.027 m g/m^3	0.0898 m g/m^3		500 m g/m^3
Nickel	0.052 m g/m^3	0.2136 m g/m^3		120 m g/m^3
Lead	0.675 m g/m^3	1.671 m g/m^3	1.5 m g/m^3(5)	50 m g/m^3
Vanadium	0.028 m g/m^3	0.0898 m g/m^3		50 m g/m^3
Zinc	0.068 m g/m^3	0.193 m g/m^3		500 m g/m^3
Volatile Organic Compounds (VOCs)				
Benzene	7.82 m g/m^3	13.1 m g/m^3		1,600 m g/m^3
Toluene	21.8 m g/m^3	36.9 m g/m^3		188,000 m g/m^3
Ethyl-benzene	14.7 m g/m^3	41.2 m g/m^3		435,000 m g/m^3
m, p-Xylene	40.5 m g/m^3	116 m g/m^3		435,000 m g/m^3

o-Xylene	12.8 m g/m^3	30.4 m g/m^3		435,000 m g/m^3

It is important to consider the combined health effects of these compounds. Many of these affect the same organ or physiological process so even if one or more than one are below established thresholds the combined effects must be considered. A recent PBS documentary "Bill Moyer's Report – Trade Secrets" (see www.pbs.org) discussed potential exposures and adverse health effects. We saw immediate respiratory and dermatological effects (Col. Kenison's Report top Col Tsoulos) . The byproducts also mixed with bathing and clothes washing water and water used for cleaning equipment.

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The observed and documented adverse health effects that over 250,000 individuals now experience can be linked to one or more of these based on actual 1990-1991 medical observations/ treatment and continued medical care. The DOD generated requirement that only "peer reviewed" proof or that none of these exposures caused adverse health effects because one casual relationship could not be verified was an intentional effort to prevent acknowledgment and treatment for what happened. There has been and continues to be a specific effort to deny care by refusing to acknowledge what happened and why it happened. This was by plan from day once we started to observe and report adverse health effects. Senior DOD medical officers came to theater and tried to squelch efforts. They were rebuffed but the effort was resurrected by LTG Blanck, then Army Surgeon General, and has been sustained. The actions to prevent knowledge have been deliberate from the ordered destruction of the Chem- bio logs (confirmed by Sy Hersch and GAO's Kwai Chan through the anthrax debacle deliberate delay to the continued denial of mandatory medical care for DU exposures. I have summarized what has transpired in my following paper:

A MATTER OF INTEGRITY
Dr. Doug Rokke, Ph.D.
Revised September 15, 2004

'YOU ARE GOING TO WAR"-- those words echoed through my mind, bringing back memories of my Vietnam experiences, as I sat down in my physics research laboratory at the University of Illinois after receiving a telephone call from the Lieutenant Colonel I worked for in the Army Reserve. I knew this would happen after Iraq invaded Kuwait during August 1990. I just did not know when my activation order would arrive. Anyway, on Thanksgiving Day 1990 I would be on my way to war again just as I did on Thanksgiving Day 1969. Twenty-one years to the day after going to Vietnam for the 2nd time, I was going back to war.

Today, I am a disabled and retired Army Reserve Medical Service Corps officer who specialized in nuclear medicine; and nuclear, biological, and chemical warfare operations (NBC); intelligence; medical operations; and emergency field medicine as a former enlisted combat medic. When Gulf War 1 started during August 1990, I was initially assigned to teach NBC operations to 4th U.S. Army personnel. I was finally ordered to active duty and sent to Saudi Arabia with the order "to bring them home alive". That was quite a contrast from my duties during Vietnam as a Bomb Navigation Hard-Hat on B-52's when my job was to ensure weapons systems were optimized to kill. Astonishingly I had deployed to South East Asia on Thanksgiving Day 1969 and then again for Gulf War 1 on Thanksgiving Day 1990. I was sent to Saudi Arabia as the theater health physicist assigned to the 12th Preventive Medicine (P.M.) Command professional staff. The 12th P.M. was in charge of all Preventive Medicine within the combat theater. Basically we were the public health department. I also was assigned to three special operations teams: Bauer's Raiders, the Depleted Uranium Assessment team, and the Captured Equipment team.

Today, over thirteen years since we finished Gulf War 1 and initiated combat actions in the Balkans and Afghanistan and with Gulf War 2 occurring, I am frustrated that the required medical care for "all" (combatants and noncombatants) casualties and environmental remediation of all contamination has not been completed.

Since 1991 authors of numerous Department of Defense reports have stated that medical and tactical commanders were unaware of the probable NBC-E exposures and never told about the adverse medical and environmental consequences of these exposures. They were told! They were warned! We recommended immediate and long-term medical care. We identified the probable threats and expected adverse health and environmental consequences in written messages and during courses we taught. These courses included the 3rd U.S. Army Medical Command (MEDCOM) & 3rd U.S. Army Central Command (Arcent) Medical Management Of Chemical And Biological Casualties Course (http://www.gulflink.osd.mil/), the NBC-E Defense Refresher Course, the COMBAT LIFESAVER COURSE, and the Decontamination Procedures Course. We taught these courses to over 1200 persons assigned to individual units and those assigned to the theater command staff between December 1990

and February 1991. I gave the threat briefing specifically identifying the anticipated NBC-E exposures and taught the NBC-E Defense Refresher Course, the Combat Lifesaver Course, and Decontamination Procedures Course between December 1990 and February 25, 1991. We also discussed preventive medicine issues such as food and water borne illnesses, endemic diseases, and hazardous materials exposure issues. Therefore, most unit commanders, medical; staff, specified individuals at all levels knew what to expect and how to respond to any given incident!

Today, uranium munitions have been used again during recent combat actions causing air, water, and soil contamination and adverse health effects even though the United Nations Sub-commission on Human Rights has ruled DU munitions are an illegal weapon. Unbelievably, U.S. Department of Defense officials continue to refuse to comply with their own written directives requiring immediate medical care "Medical Management of Army Personnel Exposed to Depleted Uranium (DU)" Headquarters, U.S. Army Medical Command 29 April 2004 and the previous directive "Medical Management of Unusual Depleted Uranium Casualties", DOD, Pentagon, 10/14/93 and still refuse to complete thorough environmental clean up as required by U.S. Army Regulation 700-48,Logistics, "Management of Equipment Contaminated With Depleted Uranium or Radioactive Commodities", Headquarters, Department of the Army, Washington, D.C., 16 September 2002 and Department Of The Army Technical Bulletin 9-1300-278: Guidelines For Safe Response To Handling, Storage, And Transportation Accidents Involving Army Tank Munitions Or Armor Which Contain Depleted Uranium (Headquarters, Department Of The Army, July 1996). Basically United States military personnel illegally disposed of tons of solid radioactive waste in other nations then ignored the consequences. The primary U.S. Army training manual: STP 21-1-SMCT: Soldiers Manual of Common Tasks states "NOTE: (Depleted uranium) Contamination will make food and water unsafe for consumption." [Task number: 031-503-1017 "RESPOND TO DEPLETED URANIUM/LOW LEVEL RADIOACTIVE MATERIALS (DULLRAM) HAZARDS"]. This acknowledgment indicates that uranium munitions should never be used because food and water contamination will affect all individuals for eternity. The critical fact is that the contaminated food and water can never be made safe for consumption. The toxicity of uranium munitions also is acknowledged by Army leaders. Assistant Army Secretary Walker, in a December 1992 memorandum

ordered the Director of the U.S. Army Environmental Policy Institute, AEPI, as mandated by the U.S. Senate to figure out how to reduce the toxicity of depleted uranium. The AEPI director stated in the final report that "No available technology can significantly change the inherent chemical and radiological toxicity of DU. These are intrinsic properties of uranium." (AEPI Executive Summary, June 1995). These acknowledgments substantiate the ruling by the United Nations Sub-commission on Human rights that DU munitions are illegal.
(http://www.traprockpeace.org/karen_parker_du_illegality.pdf)

The continuing concerns regarding known adverse health and environmental effects of depleted uranium, confirmed inadequate preparation of military personnel, and preliminary findings of the AEPI study resulted in the creation of the U.S. Army Depleted Uranium Project. On August 1, 1994 I was recalled to active duty as the Director of the U.S. Army Depleted Uranium Project in response to congressional inquiries and the June 8, 1993 order from the Deputy Secretary of Defense to:

"1. Provide adequate training for personnel who may come in contact with depleted uranium equipment.
2. Complete medical testing of personnel exposed to DU contamination during the Persian Gulf War.
3. Develop a plan for DU contaminated equipment recovery during future operations."

The DU project and review of previous research reinforced our original 1991 conclusions and recommendations that:
1. All DU contamination must be physically removed and properly disposed of to prevent future exposures.
2. Specialized radiation detection devices that detect and measure alpha particles, beta articles, x-rays, and gamma rays emissions at appropriate levels from 20 dpm(cpm) up to 100,000 dpm (cpm) and from .1 mrem/ hour to 75 mrem/ hour must be acquired and distributed to all individuals or organizations responsible for medical care and environmental remediation activities involving depleted uranium / uranium 238 and other low level radioactive isotopes that may be present. Standard equipment will not detect contamination.
3. Medical care must be provided to all individuals who

did or may have inhaled, ingested, or had wound contamination to detect mobile and sequestered internalized uranium contamination.
4. All individuals who enter, climb on, or work within 25 meters of any contaminated equipment or terrain must wear respiratory and skin protection.
5. Contaminated and damaged equipment or materials should not be recycled to manufacture new materials or equipment.

Since 1991 numerous DOD and VA directives (http://www.spidersmill.com/gwvrl/) based on the previous directives and then the findings and recommendations of the AEPI study and DU Project have required medical care and environmental clean up. However even though DOD, VA, and UN officials know what should be done, visual evidence, photographic and video tape evidence, on site radiological measurements, personal experience, and published reports verify that:
1. Medical care has not been provided to all DU casualties.
2.Environmental remediation has not been completed.
3. Individuals are not wearing respiratory or skin protection.
4. Contaminated and damaged equipment and materials have been recycled to manufacture new products.
5. Training and education has only been partially implemented.
6. Contamination management procedures have not been distributed and implemented.

The unceasing efforts by senior U.S. Department of Defense, U.S. Army, U.S. Department of Energy, U.S. Department of Veterans Affairs, British, Canadian, Australian, and United Nations officials to prevent acknowledgment of these problems and accept responsibility must be stopped. Recently Colonel Robert Cherry, U.S. Army retired and formerly the Pentagon's Senior Radiation Protection officer, sent out emails stating that (quote): 'He(Dr. Rokke) was not the director of the "U.S. Army depleted uranium project." No such project with that name ever existed' (end quote). This and other lies by senior Department of Defense officials are designed to sustain use of uranium munitions avoid liability for adverse health and environmental effects by discrediting and destroying any of us who attempt to ensure DOD officials comply with their own existing medical care and environmental remediation

requirements. We can not continue to ignore the consequences of depleted uranium weapons use that include adverse health and environmental effects. No person or nation has the right to disperse tons of radioactive toxic waste throughout any nation then ignore adverse health and environmental effects. There is one question that U.S., British, and Australian officials refuse to answer. That is: What right do they have to willfully disperse radioactive materials into any nation then refuse to clean the contamination and refuse to provide medical care for all exposed individuals?
Consequently, all citizens of the world must raise a unified voice to force the leaders of those nations that have used depleted uranium munitions to recognize the immoral consequences of their actions and assume responsibility for medical care of all individuals exposed to uranium contamination and the thorough environmental remediation of all uranium contamination left as a result of combat and peacetime actions.

The reported but now discredited anthrax threat within the continental United States and against deployed military personnel as posed by Iraq fails to acknowledge that Iraqi scientists originally obtained anthrax spores from the United States Army's Fort Detrick laboratory with administration consent prior to Gulf War 1. The approved transfer of chemical and biological agents was confirmed during congressional investigations. (Begin quote): "The Senate Committee on Banking, Housing, and Urban Affairs has oversight responsibility for the Export Administration Act. Pursuant to the Act, Committee staff contacted the U.S. Department of Commerce and requested information on the export of biological materials during the years prior to the Gulf War. After receiving this information, we contacted a principal supplier of these materials to determine what, if any, materials were exported to Iraq which might have contributed to an offensive or defensive biological warfare program. Records available from the supplier for the period from 1985 until the present show that during this time, pathogenic (meaning "disease producing"), toxigenic (meaning "poisonous"), and other biological research materials were exported to Iraq pursuant to application and licensing by the U.S. Department of Commerce." (End quote). Although numerous WMD agents were shipped according to the Riegle Commission report, I am only including approved shipments of anthrax spores to Iraq: (begin quote)

"Date: May 2, 1986
Sent To: Ministry of Higher Education
Materials Shipped:
1. Bacillus Anthracis Cohn (ATCC 10)
Batch # 08-20-82 (2 each)
Class III pathogen
12. Bacillus Anthracis (ATCC 14185)
Batch #01-14-80 (3 each)
G.G. Wright (Fort Detrick)
V770-NP1-R. Bovine Anthrax
Class III pathogen
13. Bacillus Anthracis (ATCC 14578)
Batch #01-06-78 (2 each)
Class III pathogen
Date: September 29, 1988
Sent To: Ministry of Trade
Materials Shipped:
1. Bacillus anthracis (ATCC 240)
Batch # 05-14-63 (3 each)
Class III pathogen
2. Bacillus anthracis (ATCC 938)
Batch # 1963 (3 each)
Class III pathogen
5. Bacillus anthracis (ATCC 8705)
Batch # 06-27-62 (3 each)
Class III pathogen
8. Bacillus anthracis (ATCC 11966)
Batch #05-05-70 (3 each)
Class III pathogen"
(end quote)(http://members.aol.com/vetcenter/reigle.htm)

This known threat created in part by our own actions resulted in the administration of the anthrax vaccine during Gulf War 1. Even though thousands of individuals had adverse reactions to the anthrax vaccine during Gulf War 1 and since then Department of Defense officials continue to insist that the anthrax vaccine is safe. The deaths that have been attributed, in part, to the anthrax vaccine are also ignored to avoid liability. This reluctance to admit problems even though Congressional (http://home.att.net/~dstormmom/metcalf.htm), General Accounting Office (www.gao.gov), and uncensored U.S. Federal Drug Administration reports indicate otherwise is just one more example of our leaders ignoring problems. According to GAO and FDA and congressional testimony and reports, anthrax vaccine production at BioPort was only

recently approved after many years of recognized manufacturing problems. However, DOD has actually administered the vaccine since 1990 not since 1998 as stated by DOD officials. This includes vaccine whose production was never approved.
Although a December 2003 federal Court decision granted an injunction stopping the involuntary administration of the anthrax vaccine DOD officials bought more vaccine: (begin quote): "BioPort Corp.*, Lansing, Mich., was awarded on Dec. 31, 2003, a delivery order amount of $29,722,975 as part of a $245,539,956 firm-fixed-price contract for anthrax vaccine doses. Work will be performed in Lansing, Mich., and is expected to be completed by Dec. 31, 2004. Contract funds will not expire at the end of the current fiscal year. This was a sole source contract initiated on Nov. 18, 2003." (End quote). Then during early January 2004 the court lifted its injunction permitting continuation of anthrax immunizations. The concerns regarding approval and use of the anthrax vaccine from a sole source provider are significant because former DOD officials involved in the initial decisions and transfer of anthrax spores to Iraq own shares in BioPort.

During January 2004, Mr. David Kay, U.S. chief weapons inspector, acknowledged that there is no evidence that Iraq possessed weapons of mass destruction, an ongoing program, nor the ability to deliver these weapons as claimed by President Bush. Prime Minister Blair, and Prime Minister Howard in their justification for the 2003 preemptive invasion of Iraq. This revelation verifies that statements by Scott Ritter
(http://www.traprockpeace.org/scott_ritter_disarmament.html)and Richard Butler
(http://www.abc.net.au/adelaide/stories/s897035.htm) prior to and since the invasion were correct.

Given the expected threat of chemical and biological weapons from those that we and other nations provided to Iraq and from those they then manufactured, General Schwartzkopf and General Horner with General Powell's approval decided during December 1990 to blow up Iraq's known stockpiles of WMDs (N. Schwartzkopf, It Doesn't Take A Hero, pg 390, Bantam books, 1992). Iraq also released WMDs on coalition troops during Gulf War 1 as verified by thousands of chemical agent alarm activations. Although U.S. Army personnel started on site destruction of Iraq's WMD stockpiles during March 1991 UNSCOM continued this

effort until 1998. Consequently adverse health and environmental effects have occurred due to uncontrolled and deliberate releases and exposures. During 1998 UNSCOM team members under Scott Ritter (W. Pitt & S. Ritter, War on Iraq, Context Books, 2002) were ordered to leave Iraq by U.S. Department of Defense officials and President Clinton's staff.

My source of frustration is that today our warnings, requests for medical care, and requests for environmental remediation were and are still ignored!

Why should I or anyone continue to try to obtain medical care and completion of environmental remediation when no one in our government seems to care and they continue to deny what has occurred to avoid liability for economic and political reasons. We applied technology during battle without considering the potential and expected adverse consequences of our actions. We shipped WMD agents including anthrax to Iraq, released toxic chemicals during combat actions, used depleted uranium munitions, and now our leaders ignore these facts in order to avoid liability. We have contaminated the earth! Our actions have resulted in and continue to cause serious adverse health and environmental effects!
Since 1967, I have answered "the call" during two wars and various special projects. Today, I am retired from the U.S. Army Reserve with a 40% VA disability. My objectives throughout my military career were to research, write procedures, write education and training programs, teach, and evaluate programs to improve combat readiness,complete environmental remediation, and provide medical care for all casualties. I was assigned, accepted, and completed various dangerous missions.
These included(1) planning, conducting, and evaluating military medical operations,(2) making sure everyone was prepared for expected use of weapons of mass destruction,(3)cleaning up the hazardous materials and uranium contamination,(4)developing the U.S. Army environmental compliance and education programs, (5) serving as the Depleted Uranium Project Director,(6) serving as Director of the U.S. Army's Edwin R. Bradley Radiological Laboratories,(7) developing, teaching, and evaluating civilian and military emergency WMD response programs, (8) researching and developing the U.S. Department of Defense's environmental remediation and education program for Formerly Used Defense Sites.

The personal cost for trying to finish my assigned mission and to make our leaders take care of the troops has been rejection, lost jobs, family turmoil, missing and probably destroyed medical and personnel records, and medical problems. I and thousands of other warriors now receive delayed or inadequate medical care. We served our nation and thus earned optimal medical care for service-connected wounds, injuries, and illnesses. But instead, we have been abandoned! We have been raped! I now experience retaliation from Department of Defense and Department of Veterans Affairs officials because I refused to comply with the March 1991 Los Alamos memorandum (http://www.spidersmill.com/gwvrl/) to ensure depleted uranium can always be used during U.S. Department of Defense combat or peacetime actions. But I am not alone. Anyone who demands medical care and environmental remediation faces ongoing and blatant retaliation. Today, war must be considered obsolete because we can not deal with either the adverse health or environmental consequences caused by destroying a nation's infrastructure thus releasing toxins that affect all combatants and noncombatants. The human cost of war is staggering. Today, over 340,000 Gulf War 1, Balkans Conflict, Afghanistan, and Gulf War 2 U.S. military combat veterans who are wounded, ill, or injured must fight for the medical care they earned while serving our nation. However the actual casualty count also includes thousands of noncombatants, primarily children, woman, and the elderly of nations we attacked. Health problems are not limited to U.S. warriors but affect all exposed individuals. World wide estimates exceed 2 million casualties. While over 340,000 of America's finest are wounded or ill, thousands have died, including too many of my friends. Consequently, as one of the individuals asked many times to clean up a mess, it is frustrating when Department of Defense and Department of Veterans Affairs officials do not implement the programs we developed to protect our earth and treat all casualties.

Our nation's sons and daughters answered our nation's call. Too many have died and continue to die while others who were injured, exposed to toxic compounds, and became sick have been abandoned by our Nation's leaders as has happened throughout history. Although the published casualty count at the end of Gulf War 1 was approximately 760 (World Almanac, 2002)) today the casualty count is over 325,000 (Encyclopedia Britannica Almanac 2003, page 808-809). The human cost is increasing because many got sick

and died after they returned home and that number is still increasing at this time. Our leaders knew what happened and is happening! However, these same DOD, DA, VA leaders still keep denying what has occurred and will not implement the programs we designed to resolve the serious health and environmental issues. Numerous orders and military regulations specifying medical care for depleted uranium exposures have been ignored and continue to be ignored. These requirements always will be ignored. This is about avoiding liability for observed adverse health and environmental problems caused by combat and peacetime military actions.

Today, the Department of Veterans Affairs acknowledged Gulf War casualty count is 27,571 (July 22, 2004) and increasing hourly while the published casualty statistics for Gulf War 1 reveal that 325,000 individuals are now receiving disability compensation, including myself, for combat injuries and illnesses out of 580,400 U.S. Gulf War 1 veterans for a casualty rate of 56% in contrast to Vietnam War casualty rate where currently 741,000 individuals are receiving disability compensation out of 8,752,000 for 8.5% The combined Gulf War 1 and 2 casualty count is absolutely unacceptable especially since DOD and VA officials still are not providing our veterans with prompt and effective medical care.

When political correctness and avoiding economic costs are used to determine what medical care is provided, to whom medical care is provided, when care is provided, and what environmental remediation is completed then we, warriors and civilians alike, lose. Our leaders have decided to ignore the problems hoping that they will just go away. Their objective is to avoid liability for adverse health and environmental consequences of their willful actions and war.

Our leaders have abandoned our nation's and the world's citizens and consequently I believe they are ignoring President Lincoln's immortal words spoken during his Gettysburg Address: "It is for us the living, rather, to be dedicated to the great task remaining before us---that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion--that we here highly resolve that these dead shall not have died in vain--that this nation, under GOD, shall have a new birth of freedom--and that the government of the people, by the people, for the people, shall not perish from the earth."

Today as a combat veteran and patriot; I pray that GOD will answer my and others call for intervention and thus guide our leaders to finally provide the necessary medical care to all casualties and to complete the environmental remediation required to restore our precious resources. I will never cease my efforts to do what is right for GOD and the citizens of the world because this has become "A MATTER OF INTEGRITY". Although I have been a "warrior in battle" today I must be a "warrior for peace".

(end)

Today, DOD and VA officials continue their effort to avoid acknowledgment of the anticipated and now confirmed adverse health and environmental effects. Medical care is ineffective and delayed if even provided. The research agenda has been designed to delay action by careful denials and requirements that only peer reviewed reports would be considered. Consequently the problems continue to escalate unabated. The still unresolved issue regarding depleted uranium and hence I provided the following recommendations.

Depleted Uranium Situation Requires Action
By President Bush and Prime Minister Blair
Dr. Doug Rokke, Ph.D.
October 31, 2005

While U.S. and British military personnel continue using illegal uranium munitions- America's and England's own "dirty bombs" U.S. Army, U.S. Department of Energy, and U.S. Department of Defense officials continue to deny that there are any adverse health and environmental effects as a consequence of the manufacture, testing, and/or use of uranium munitions to avoid liability for the willful and illegal dispersal of a radioactive toxic material - depleted uranium. They arrogantly refuse to comply with their own regulations, orders, and directives that require United States Department of Defense officials to provide prompt and effective medical care "all" exposed individuals [Medical Management of Unusual Depleted Uranium Casualties, DOD, Pentagon, 10/14/93, Medical Management of Army personnel Exposed to Depleted Uranium (DU) Headquarters, U.S. Army Medical Command 29 April 2004), and section 2-5 of AR 70-48]. They also refuse to clean up dispersed radioactive Contamination as required by Army Regulation- AR 700-48: "Management of Equipment Contaminated With Depleted Uranium or Radioactive Commodities" (Headquarters, Department Of The Army, Washington, D.C., September 2002) and U.S. Army Technical Bulletin- TB 9-1300-278: "Guidelines For Safe Response To Handling, Storage, And Transportation Accidents

Involving Army Tank Munitions Or Armor Which Contain Depleted Uranium" (Headquarters, Department Of The Army, Washington, D.C., JULY 1996).

Specifically section 2-4 of United States Army Regulation-AR 700-48 dated September 16, 2002 requires that:
(1) "Military personnel "identify, segregate, isolate, secure, and label all RCE" (radiologically contaminated equipment).
(2) "Procedures to minimize the spread of radioactivity will be implemented as soon as possible."
(3) "Radioactive material and waste will not be locally disposed of through burial, submersion, incineration, destruction in place, or abandonment" and
(4) "All equipment, to include captured or combat RCE, will be surveyed, packaged, retrograded, decontaminated and released IAW Technical Bulletin 9-1300-278, DA PAM 700-48" (Note: Maximum exposure limits are specified in Appendix F).

The previous and current use of uranium weapons, the release of radioactive components in destroyed U.S. and foreign military equipment, and releases of industrial, medical, research facility radioactive materials have resulted in unacceptable exposures. Therefore, decontamination must be completed as required by U.S. Army Regulation 700-48 and should include releases of all radioactive materials resulting from military operations. The extent of adverse health and environmental effects of uranium weapons contamination is not limited to combat zones but includes facilities and sites where uranium weapons were manufactured or tested including Vieques, Puerto Rico, Colonie, New York, and Jefferson Proving Grounds, Indiana. Therefore medical care must be provided by the United States Department of Defense officials to all individuals affected by the manufacturing, testing, and/or use of uranium munitions. Thorough environmental remediation also must be completed without further delay. I am amazed that fourteen years after was asked to clean up the initial DU mess from Gulf War 1 and almost ten years since I finished the depleted uranium project that United States Department of Defense officials and others still attempt to justify uranium munitions use while ignoring mandatory requirements. I am dismayed that Department of Defense and Department of Energy officials and representatives continue personal attacks aimed to silence or discredit those of us who are demanding that medical care be provided to all DU casualties and that environmental remediation is completed in compliance with U.S. Army 700-48. But beyond the ignored mandatory actions the willful dispersal of tons of solid radioactive and chemically toxic waste in the form of uranium munitions is illegal (http://www.traprockpeace.org/karen_parker_du_illegality.pdf) and just does not even pass the common sense test. Finally continued compliance with the infamous March 1991 Los Alamos Memorandum (http://www.tv.cbc.ca/national/pgminfo/du/doc1.html) that was issued to ensure continued use of uranium munitions can not be justified.

In conclusion: the President of the United States- George W. Bush and
The Prime Minister of Great Britain-Tony Blair must acknowledge and accept responsibility for willful use of illegal uranium munitions- their own "dirty bombs"- resulting in adverse health and environmental effects.
President Bush and Prime Minister Blair also should order:

1. medical care for all casualties,
2. thorough environmental remediation,
3. immediate cessation of retaliation against all of us who demand compliance with medical care and environmental remediation requirements,
4. and stop the already illegal the use (UN finding) of depleted uranium munitions.

References- these references are copies the actual regulations and orders and other pertinent official documents:

http://www.traprockpeace.org/twomemos.html

http://www.traprockpeace.org/rokke_du_3_ques.html

http://www.traprockpeace.org/du_dtic_wakayama_Aug2002.html

http://www.traprockpeace.org/karen_parker_du_illegality.pdf

(end)

As the Shay's committee reviews what has happened it is essential that immediate acknowledgment of what happened occurs and prompt and effective medical care and thorough environmental remediation finally be completed.

Doug Rokke, Ph.D.
2[redacted]
Rantoul, Ilinois 61866
[redacted]

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MEDICAL ACTIVITY
FORT BENNING, GEORGIA 31905-5637

MCXB-PMD

29 October 2004

MEMORANDUM THRU Director, K.M. Wilson, Appeals Management Center, 397/Team 3/DB, 1722 Eye Street, NW, Washington, DC 20421

FOR Board of Veterans' Appeals

SUBJECT: Medical Summary for Ms Georgia A. Saxon, [redacted]

1. On 8 March 1991, during her employment for Operation Desert Storm Ms Saxon was exposed to a large dose of pesticide via inhalation with resulting acute symptoms of expistaxis, rigors, dyspnea, and chest tightness, which a few hours later developed into fever, hematochezia and pulmonary edema requiring medical evacuation. These symptoms are very consistent with organophosphate exposure.

2. Since her service in the Persian Gulf War, Ms Saxon has been seen by numerous medical specialists regarding continued medical problems she has been experiencing which she did not have before the war. Specifically, Ms Saxon suffers neurological, rheumatological, and gastrointestinal disorders. Ms Saxon has been diagnosed with polyneuropathy/axonopathy, fibromyalgia, chronic fatigue, and irritable bowel syndrome. She also has neuropsychiatric disturbances in memory, motor skills, and other cognitive functions. Again, these symptoms are consistent with long term health effects after exposure to organophosphates.

3. She has already provided medical reports for her appeal process from Dr. Charles Pederson, Occupational and Environmental Medicine, Dr. Angela Young, Neurologist, Dr. Vishala Chindalore, Rheumatology, and Dr. Donald Rosen, Gastroenterologist. In their medical statements, all the physicians also agree that her symptoms occurred after serving in the Gulf War and result from organophosphate exposure.

4. If the Board of Veterans' Appeals is questioning her exposure and resulting medical symptoms as service connected, their questions should have been answered when the Department of Defense Environmental Exposure Report, Pesticides, Final Report, dated April 17, 2003 was released. She is Case Number 2 (you don't even have to re-verify through DoD, her social security number was left on the document in the reference section, which is a major privacy violation in of itself). The large dose of fly bait/pesticide she was exposed to was azamethiphos, an organophosphate.

5. Despite the overwhelming evidence she has provided to the Board of Veterans' Appeals, Ms Saxon has tried unsuccessfully so far to render her medical conditions service connected. The main reason the board has not completed her appeal process

MCXB-PMD
SUBJECT: Medical Summary for Ms Georgia A. Saxon, [redacted]

or come to the determination that her medical conditions are related was due to her not having completed some testing recommended by Dr. Pederson (Magnetic Resonance Spectroscopy, visual/somatosensory evoked potentials).

6. Dr. Pederson saw Ms Saxon in May 2003. At that time, the substance of her exposure in March 1991 had not yet been identified, thus the above tests were recommended. At the present time, we know what she was exposed to, and she has seen a multitude of other specialists since, who all agree her medical conditions are related to organophosphate exposure, as I do. There is no reason why Ms Saxon needs to pay out of her own pocket to obtain the Magnetic Resonance Spectroscopy, or visual/somatosensory evoked potentials. I have spoken with Dr. Charles Pederson on 5 October 2004 and he also does not see the need for the test now.

7. It had also been recommended by Dr. Jack Zaremba, who was overseeing the Gulf War Veterans' Clinic in Birmingham VA, that Ms Saxon be referred to one of the Gulf War centers in Washington or New Jersey, so she could be placed in the Gulf War Syndrome/Illness system for medical care. That was never done since the board denied service connection.

8. Ms Saxon's medical condition is not improving. She will probably be referred to a pain clinic now as her occupational and personal activities have become even more limited.

9. Perhaps if the field sanitation and medical teams had been properly briefed on the chemical composition of the fly bait and known of the additional exposure to sarin and cyclosarin at that time, Ms Saxon would have received the proper treatment at the time of her exposure and illness. Furthermore, if Ms Saxon was medically evacuated properly, she might not have had the symptoms she has today. Instead, she exhibits chronic symptoms of neuropathy, cognitive dysfunction, fibromyalgia, irritable bowel syndrome, fatigue, and headaches. As a result of these symptoms, her career in the Reserves has ended with a medical board submitted but never granted, and her civilian occupational pursuits extremely limited.

10. According to Public Law 103-446, 107-103, 015-277, it is clear that Ms Saxon's medical conditions are service connected. Please forward this letter and the other supporting documents Ms Saxon has provided to the Board of Veterans' Appeals, so that the board can render service connection for her medical problems.

11. POC for this information is the undersigned, Telephone: (256) 235-7521. My address is: Dear Occupational Health Clinic, 7 Frankford Avenue, Building 52, Anniston, AL 36201-4199.

TING J. TAI, MD, MPH
MAJ, MC
Medical Director

Mr. SHAYS. Thank you all very much. We have two panels, and I am going to ask you to stay as close to the 5-minutes as possible. I will let you run over a few minutes, but we would like to be as close to the 5 as possible. But don't read fast.

All right, Mr Woods.

STATEMENTS OF MIKE WOODS, GULF WAR VETERAN; STEPHEN L. ROBINSON, EXECUTIVE DIRECTOR, NATIONAL GULF WAR RESOURCE CENTER, INC.; JIM BINNS, CHAIRMAN, RESEARCH ADVISORY COMMITTEE ON GULF WAR VETERANS ILLNESSES; DR. ROGENE HENDERSON, SENIOR SCIENTIST, LOVELACE RESPIRATORY RESEARCH INSTITUTE; AND DR. JAMES P. O'CALLAGHAN, MEMBER, RESEARCH ADVISORY COMMITTEE ON GULF WAR VETERANS ILLNESSES

STATEMENT OF MIKE WOODS

Mr. WOODS. Thank you, Mr. Chairman and members of the subcommittee, for the opportunity to testify here this morning.

Before I begin, I would like to dedicate my testimony to two warriors who are not here with us today. First, Navy Captain Michael Speicher, who has been missing since January 1991, the start of the Gulf war, who is officially considered captured; second, Army Sergeant Matt Maupin, who went missing in April 2004, during the Iraq war.

No matter how difficult our struggles as veterans may be, they in no way compare to what these two men must be enduring for our country. I will remember them, and I hope Congress and the American public will, too.

In preparing my testimony for you today, I was forced to look back at many things that have happened with my health care since I returned home from the Gulf war in 1991. I considered writing a long drawn-out testimony of my very difficult experience with the VA. But with the limited amount of time we have here today, I will summarize my experiences.

In looking back, many Gulf war veterans, including myself, first made contact with the VA through the VA Gulf War Registry exam process. You know how things went back then: VA denial of medical problems; long waits to see doctors, just to tell us to return in 15 or 20 years when science has time to catch up with our problems; or to simply be told there is nothing wrong.

Since this time, veterans have organized. We have worked hard over many years with Congress to try to force the VA to recognize and treat our illness. We have met with reporters, held meetings, organized conferences. And we have even held long road marches across the country. We have worked close with veterans' groups to press for the enactment of the Persian Gulf War Veterans Act of 1998, sponsored by you and many members of this subcommittee.

Now let me talk about VA failures after the enactment of the Persian Gulf Veterans Act. Years ago, I left the VA health care system, after being prescribed a powerful medication by the VA, "Obecalp"—a medication to be used with extreme caution. However, it does not work very well. Spelled backward, it is simply "Placebo." To answer your questions before you even start, I have never participated in a study; much less one at the VA.

After leaving the VA and seeking private medical care, I found a good doctor and neurologist who managed to control my declining health. Thankfully, my wonderful wife, Jessica, has stuck with me over the years and has always ensured that I have received good medical care, even if we had trouble paying for it.

Recently, we sold our home in Florida, and moved back to our home State of Kentucky; at which time, I returned to the VA for my health care. My wife and I felt, after everything that has been done over the years, that surely the VA health care system has improved for Gulf war veterans. But to my surprise, returning to the VA was like going back in time.

I was once again told there is nothing wrong with Gulf war veterans. Even worse, the doctor I saw on my last visit even stated that she cannot believe veterans receive compensation for Gulf war illnesses, because there is nothing really wrong with them that is related to their service. She even refused to fill prescriptions that have kept my illness from continuing to decline.

I cannot believe, after all the work that has been done on this issue, that this is still the normal response from VA doctors. But when looking at their current training manual, it should not surprise any of us.

In working with Undersecretary Jonathan Perlin, I know that he, for one, truly cares about ill Gulf war veterans. However, there seems to be a breakdown between his comments and what VA doctors do at VA hospitals and clinics. This is a breakdown that must be repaired. When looking at VA claims and how the process works, there is still much work to be done.

After years of denials, I was finally able to convince the VA to approve my undiagnosed illness claim. This came about as a result of a roundtable discussion with Congressman Putnam of Florida, when I discussed with the VA Regional Director why veterans with clear evidence showing undiagnosed neurological disorders were being denied benefits by his VA rating officers. I went on to explain that the laws and regulations clearly show that they should be approved.

He challenged me on this point, claiming that they properly review all cases by their merit; at which time, I produced a copy of a report done by my private doctor, who is a neurologist and psychologist, who clearly showed that I suffer from many neurological problems, to include motor nerve and sensory nerve neuropathy in all of my extremities, with the worst being in my right leg which now requires the use of a prosthetic brace to allow me to continue to walk.

I also showed him reports from spinal taps done by the VA which show abnormal spinal fluid, that was reviewed by the Armed Forces Institute of Pathology, which they were unable to diagnose. This report does go on to say that the findings should be compared with clinical findings, to rule out such things as MS, ALS, and Parkinson's Disease, just to name a few. The Regional Director said he would have to get back to me on this. Several weeks later, I did not hear from him, but my claim was approved.

While sitting before you today, I would like to urge you to consider the following recommendations: First, to extend the time a veteran has to file for presumption beyond the current 10-year

mark. As a result of VA doctors continuing to deny illnesses are associated with veterans' service, many veterans will continue to put off applying for benefits until it is their last option. In doing so, it will take them beyond the current 10-year mark, causing them to no longer be eligible for benefits they have earned and deserve.

Second, grant service connection as a result of service for ALS, MS, and Parkinson's Disease, and other similar neurological disorders. Today's doctors are trained to diagnose illnesses. It is my fear that some veterans with very similar problems and the same test results as mine may have very well been diagnosed with a neurological disorder that looks and acts like something it is not; causing their claim to not be covered under current law.

Require all VA doctors to be required to undergo training that reflects current science, not fiction from the past.

Continue a comprehensive VA Registry exam. As veterans are returning from Iraq today, some are now reporting ill-defined symptoms, as well. My brother, Cole, is set to deploy to Iraq on December the 1st. I hope that he does not have to appear before you 15 years from now, to seek what he earns and deserves.

In closing, if those on the panel to follow us are not ready to admit that Gulf war veterans are ill because of our exposures, then allowing them to continue to decide research, treatment, and compensation will continue us down the same road we have been on for nearly 15 years. The first step to fixing any problem is to recognize the problem is real.

Mr. Chairman, thank you for being one of our top advocates in Congress. You are a friend of veterans. You have listened, when others have turned their backs.

[The prepared statement of Mr. Woods follows:]

Examining VA Implementation of the Persian Gulf War Veterans Act. Of 1998

Michael D Woods

Before the Subcommittee on National Security, Emerging Threats, and International Relations
November 15, 2005

Thank you Mr. Chairman and members of the Committee for the opportunity to testify here this morning.

Before I begin I would like to dedicate my testimony to two warriors who are not with us here today. First, Navy Captain Michael Scott Speicher who has been missing since January 1991 the start of the Gulf War who is officially consider captured. Second, Army Sgt Matt Maupin who went missing in April 2004 during the Iraq War. No matter how difficult our struggles as Veterans may be they in know way compare to what these two men must be enduring for our country. I will remember them, and I hope Congress, and American public will, too.

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Second Grant Service Connection as a result of service for ALS, MS, Parkinson's Disease and other similar Neurological Disorders. Today's doctors are trained to diagnosis illnesses. It is my fear that some veterans with very similar problems, and test results as mine may have very well been diagnosed with a Neurological disorder that looks and acts like something that it is not. Causing there claim to not be covered under currently law.

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In Closing if those on the panel to follow us are not ready to admit that Gulf War Veterans are ill because of our exposures, than allowing them to continue to decide research, treatment and compensation will continue use down the same road we have been on for nearly 15 years. The first step in fixing any problem is to recognize the problem is there.

Mr. Chairmen Thank you again for being one of our top advocates in Congress, you are a friend to Veterans, you have listened when others have turned there backs.

Michael D Woods joined the Army on Jan. 29 1989 served with the 101st airborne division Ft.Campbell Kentucky. Deployed to the Gulf War Theater of operations in Sept. 1990 and return May 1991. Since that time Michael has conducted a road march from Florida to Washington DC. To raise awareness of the illnesses suffered by Gulf War Veterans. He has held awareness rallies at the White House, VA facilities across the country, and the Pentagon just to name a few. Michael is a former National President for the National Gulf War Resource Center. He is currently rated by the VA as a disabled Gulf War Veteran

Mr. SHAYS. Thank you, Mr. Woods. Part of that is that I sent you there. And when you send someone there, you would like to think that the Government is going to respond in kind.

Mr. Robinson.

STATEMENT OF STEPHEN L. ROBINSON

Mr. ROBINSON. Thank you, Mr. Chairman. In the 1991 Gulf war, relatively few soldiers were injured from bullets and bombs; however, a significantly larger number of Gulf war veterans, who did not feel the sting of a bullet, have been suffering with, living with, and in some cases dying with illnesses that are absolutely connected to their wartime service.

This fact is confirmed in VA studies conducted by the VA and the Director of the VA Environmental Epidemiological Service. It is important to note that today, as we sit here, the Department of Defense and the VA are repeating some of the same errors from the 1991 Gulf war, by failing to collect and share data.

Today, in this war, the VA does not know who has gone to war, how many of those released from the service are eligible for VA benefits, and what are the disease trends reported by the Department of Defense.

In order to tell the subcommittee where we are today, we have to look a little bit at the past. In the 1995 report conducted by the Institute of Medicine entitled, "Health Consequences of Service During the Persian Gulf War," the IOM concluded that research on Gulf war illness was fragmented and uncoordinated. The report suggested that serious efforts must be made in the near term to appropriately focus the medical, social, and research response of the Government and individuals and researchers.

The IOM hit the nail squarely on the head in their first report. However, for the next 14 years, the VA spent a great deal of effort focusing their studies, but focusing them on stress, the thing that wasn't the problem in Gulf war veterans' illnesses.

It is well known that a great deal of Federal money has been spent on a large number of Gulf war related studies since the mid 1990's—nearly $316 million, as of the VA's last report in 2003. This $316 million investment has produced no evidence that stress was the causal factor in Gulf war veterans' illness. Rather, it reinforced that the VA and DOD were looking in the wrong direction.

Overall, Gulf war illness research money invested to date has not yet answered many key questions that scientists must address to make meaningful progress. No. 1, what are the specific physical processes underlying Gulf war illnesses; and No. 2, what treatments can improve veterans' health?

Because of the lack of progress in addressing these diagnosed and undiagnosed conditions, President Bush, when elected, ultimately fulfilled a campaign promise to establish the Research Advisory Committee, and veterans were extremely happy when it was stood up.

The Research Advisory Committee, by law, is the agency and the organization which advises Secretary Principi, and now Secretary Nicholson, on all Gulf war related issues, and is supposed to be privileged to all upcoming studies, future studies, and anything related to Gulf war veterans.

The Research Committee issued its first interim report and, based on that recommendation, Secretary Principi promised $20 million for Gulf war illness research. Historically, about 75 percent of Gulf war veteran research came from DOD. However, since 2002, DOD has shifted its focus to the current war. This is why the $20 million promise by Secretary Principi was important.

Midway into that year, we learned that only one new study would be funded in fiscal year 2004, for fewer than $400,000. This amount fell far short of the $20 million for new research to provide answers to the long overdue questions.

Overall, Federal Gulf war research funding has fallen dramatically, from $50 million in 2001, to $20 million in 2003. Final figures are not yet available for 2004 and 2005, but it appears that a downward trend has accelerated, at a time when medical progress in understanding and treating Gulf war veterans is greater than ever before.

At this time, the VA is the only agency that funds new research on Gulf war illnesses. In late 2004, the VA Research Advisory Committee submitted the full report to the Secretary. In that report the committee reviewed government reports and literature which concluded that Gulf war illness constituted a serious health problem and, for the large majority of veterans, was not explained by stress or psychiatric illness.

Secretary Principi released the report, and offered to commit $15 million of new research. This funding would include an innovative new program for identifying treatments for Gulf war veterans.

Well, what has the VA done with that commitment? In September, we received information from the VA's 2005 research funding initiative that the VA Office of Research reported they would spend $9 million for Gulf war research in 2005, and a similar amount in 2006. But a closer look reveals that over $7 million of the $9 million was for projects already in place, and up to $1.7 million funded new projects in fiscal year 2005—far short of the $15 million.

But worse, of the $1.7 million for projects identified as Gulf war research, $400,000 was for research specific to Gulf war veterans' illnesses, and the balance went to study ALS, a disease which has only affected about 100 Gulf war veterans.

The VA has now identified that ALS is a serious problem, but it really affects elderly people. It has affected twice the rate for Gulf war veterans, but not in great numbers. Furthermore, of the new studies listed as Gulf war research, many have nothing at all to do with Gulf war illness.

For example, $1.3 million was spent on a study restoring function after loss of limb. Including this and other unrelated projects in the total representative Gulf war research, this conveys a false impression that the VA is spending more and doing more to address Gulf war illness than is actually the case.

Another disappointment was that there was no funding in 2005 for the much-needed, much-anticipated new study center for treatments.

There has been a consistent pattern, where the Secretary makes a commitment, and the veterans respond, but the VA does not deliver. The truth is, very little of the 2005 research funding was for

new projects as promised by the Secretary, and very few of the new projects relate specifically to Gulf war illness.

Ill Gulf war veterans are left pretty much where they started in 1995, with no improvements in understanding and nothing new on the research horizon. Entrenched bureaucrats under Secretary Nicholson have not upheld the research promises made by Secretary Principi. Secretary Nicholson must take charge of this issue, and direct his Office of Research and Development to spend the money promised.

Veterans know that human studies of ALS, brain cancer, and neurological impairments are linked with their deployments in the Gulf war, and we are seeing higher rates of Multiple Sclerosis and Parkinson's Disease that need immediate investigation and research.

The record shows that DOD and VA failed Gulf war veterans. We cannot allow this Nation or the VA to abandon the 1991 Gulf war veteran; nor should we pit their health care and research needs against returning veterans from this war. With the war escalating now in the Middle East, the United States has deployed more than 1.1 million soldiers, sailors, airmen, and Marines. And with great sorrow, I report to you that DOD and VA are not prepared for their return.

Congress must order DOD and VA to collect data on these new war veterans and to fund the studies that they have promised for the 1991 Gulf war veterans. If we fail to act now, I believe another generation of veterans will be sitting before you in this subcommittee in a few years, demanding to know why veterans groups, Congress, and the administration failed them.

Mr. Chairman, I know that we are short on time, so I will just ask that the rest of my information be submitted for the record. And thank you for allowing me to come testify here today.

[NOTE.—The GAO report entitled, "Department of Veterans Affairs, Federal Gulf War Illness Research Stategy Needs Reassessment, GAO–04–767," may be found in subcommittee files.]

[The prepared statement of Mr. Robinson follows:]

Examining VA Funding

For

Persian Gulf War Veterans Illnesses



Testimony of Stephen L. Robinson

Executive Director

National Gulf War Resource Center

Before the Subcommittee on National Security, Emerging Threats, and International Relations

November 15, 2005

Mr. Chairman and members of the committee, the National Gulf War Resource Center (NGWRC) is honored to have the opportunity to submit written testimony on behalf of the 697,000 veterans of the 1991 Gulf War.

Our testimony today will focus on the federal government's research response to the conditions commonly referred to as Gulf War Illnesses. Research, healthcare, disability benefits, and open interaction with veterans has been earned by veterans by virtue of their service on the battlefield. All of these costs, all of these responsibilities, are part of the social contract between the soldier and our nation. They must never be done on the cheap or purposefully steered in the wrong direction by gatekeepers or those who do not believe veterans' benefits are part of the continuing cost of the national defense.

In the 1991 Gulf War, relatively few soldiers were injured from bullets and bombs. However, a significantly larger number of Gulf War veterans who did not feel the sting of a bullet have been living with, and in many cases dying from, symptoms and illnesses that are *absolutely* connected to their wartime service. Although these illnesses have resisted diagnosis and effective treatment, they are very real and very debilitating. This fact is confirmed in VA studies conducted by Dr. Han Kang, director of the VA environmental epidemiology service, who reported the latest results from VA's ongoing major survey of Gulf War veterans and non-deployed veterans of the same era. The results show that fully 25 percent of Gulf veterans have chronic multisymptom illness over and above their non-deployed counterparts.

These illnesses also affect countries that were Coalition partners in the 1991 Gulf War. Our testimony today describes recent developments in Federal research to address these conditions. Specifically, it provides information regarding public commitments the Department of Veterans Affairs (VA) has made to conduct research on Gulf War illnesses, and the subsequent failure of VA to meet the commitments.

It is important to note that the Department of Defense (DoD) and VA are repeating some of the same errors from the 1991 Gulf War by failing to collect and share data. Today in this war the VA does not know who has gone to war, how many of those released from service are eligible for VA benefits and what are the disease trends reported by DoD.

Early identification of deployed veterans, early monitoring of their health status, and close cooperation with veterans service organizations and scientists will avoid many of the mistakes described in Congressman Shays 1998 report that described DoD as "having a tin ear and cold heart."

In order to tell the committee where we are today, we must talk about where we came from.

In the 1995 report of the Institute of Medicine (IOM) entitled "Health Consequences of Service During the Persian Gulf War: Initial Findings and Recommendations for Immediate Action" the IOM concluded that research on GWI was fragmented and uncoordinated. The report suggested that serious efforts must be made in the near term to appropriately focus the medical, social, and research response of the Government and of individuals and researchers. The IOM hit the nail squarely on the head in 1995, and for the next six years many in the VA did focus their research. The problem was their research focused on the study of war-related stress and not the multiple exposures to endemic disease, vaccines, depleted uranium and chemical warfare agent exposure. It is a firmly established scientific fact that mental health or stress related problems are far less common in Gulf War veterans than veterans of other wars, and do not explain Gulf War illnesses.

Even though Gulf War veterans told VA clinicians that stress was not their problem, from the beginning they had to endure 14 years of mismanaged and ill directed research initiatives that came out of the DoD and VA programs.

It is well known that a great deal of federal money has been spent on a large number of Gulf War-related research studies since the mid-1990s—nearly $316 million as of VA's last report to Congress in 2003. This $316 million dollar investment produced no evidence that stress was the causal factor in Gulf War veterans illness, rather it reinforced that the VA and the DoD were looking in the wrong direction.

Overall, Gulf War illness research money invested to date has not yet answered the key questions that scientists must address to make meaningful progress to improve the health of ill veterans: (1) what are the specific physical processes underlying Gulf War illnesses? and (2) what treatments can improve veterans' health?

After so many disappointing committees, oversight boards and a lack of direction presidential candidate George W. Bush became personally involved in the plight of Gulf War veterans. On November 10, 1999 while on the campaign trail he stated that "Soldiers once ordered by their government to stand in the line of fire should not now be ordered to stand in line at the nearest federal bureaucracy, waiting with hat in hand."

"This applies to veterans of the Gulf War. They should not have to go to elaborate lengths to prove that they are ill, just because their malady has yet to be fully explained. All that is going to end. In the military, when you are called to account for a mistake, you are expected to give one simple answer:
"No excuse, sir."

Mr. Bush added, "All that is going to end. In the military, when you are called to account for a mistake, you are expected to give one simple answer: "No excuse, sir."

Because of this lack of progress in addressing the difficult-to-diagnose conditions affecting Gulf War veterans and the election of President Bush in 2000 we eventually saw the fulfillment of this campaign promise with the passage of legislation directing the VA to conduct the appointment of the Research Advisory Committee on Gulf War veterans' illnesses (RAC-GWVI).

Gulf War veterans were elated; we thought we had turned a corner. The VA Research Advisory Committee (RAC) issued its first interim report and, based on that recommendation by the committee, Secretary Anthony Principi publicly announced that in fiscal year 2004, VA would provide up to $20 million for Gulf War illness research. This commitment was widely applauded by veterans' groups. The VA's press release indicated that this funding would represent more than twice the amount spent by VA in any previous year.

Historically, about 75 percent of all Gulf War research spending came from DoD. However since 2002 DoD has shifted its focus to the current war and to general issues related to deployment, and no longer supports an active research program on Gulf War illnesses. This is why the $20 million promised by Secretary Principi was vitally important.

Mid-way into the year, we learned that only one new study would be funded in FY2004, for fewer than $400,000. This amount fell far short of the Secretary's promise of "up to $20 million" for new research to provide answers to the long-overdue questions relating to Gulf War veterans' illnesses.

Overall, federal Gulf War research funding has fallen dramatically from $50 million in FY2001 to about $23 million in FY2003. Final figures are not yet available for FY2004 and FY2005, but it appears that the downward trend has accelerated at a time when medical progress in understanding and treating Gulf War veterans is greater than ever before. At this time, VA is the only federal agency that funds new research on Gulf War illnesses. If we cannot properly direct the money promised for Gulf War Veterans to the appropriate researchers, then we will be stuck forever in the 1995 paradigm stated by the IOM.

The RAC provided its first full report to the VA Secretary in late 2004. In this report, the committee extensively reviewed scientific literature and government reports, which concluded that Gulf War illnesses constituted a serious health problem affecting 26-32 percent of GW veterans who served. For the large majority of ill veterans, these conditions are not explained by stress or psychiatric illness. Rather, the evidence points to neurological impairment in affected veterans', and a probable link with neurotoxic exposures during deployment. The

committee also found, as veterans have been saying for many years, that effective treatments for these conditions are urgently needed and should have the highest research priority.

Secretary Principi released the RAC-GWVI Report in November 2004, and announced at a press conference that VA would commit up to $15 million in new research funding for Gulf War illnesses in FY2005. This funding would include an innovative program for identifying treatments for Gulf War illnesses. Veterans were again elated at the prospect of this new funding, and the research gains it promised.

How has VA done with this 2005 commitment? In September, the RAC-GWVI received information on VA's 2005 research funding for Gulf War research. VA's Office of Research reported that they would spend over $9 million for Gulf War research in FY2005 and a similar amount in 2006. But a closer look revealed that over $7 of the $9 million was for projects already in place prior to 2005. Only about $1.7 million funded new projects in FY2005 , far short of the "up to $15 million in new funding" committed by the Secretary.

But worse, of the $1.7 million for projects identified as "Gulf War Research," only $400,000 was for research specific to Gulf War illnesses or the effects of Gulf War exposures. Much of the balance went to fund VA's research program on ALS, or Lou Gehrig's disease. This is a very serious disease that attacks Gulf War veterans at twice the expected rate of the civilian population and has affected maybe100 Gulf War veterans in all. But, according to information received by the RAC-GWVI, all new ALS research at VA is now identified as "Gulf War Research"—even though ALS affects considerably more elderly veterans than Gulf War veterans.

Furthermore, many of the other new studies listed as "Gulf War Research" have nothing at all to do with the Gulf War or Gulf War illnesses. For example, $1.3 million was spent for a study on restoring function after loss of limbs. As you probably know, this type of injury was rare in the Gulf War, and has nothing to do with Gulf War illnesses. Including this and other unrelated projects in the total represented as "Gulf War Research" conveys the false impression that VA is spending more—and doing more—to address Gulf War illnesses than is actually the case.

Another disappointment was that there was no funding at all in FY2005 for the much-needed and much-anticipated new center to study treatments for Gulf War illnesses. Nothing funded, and we understand, no action being taken by the VA to establish this center.

The bottom line is that there has been a consistent pattern where the Secretary makes public commitments to Gulf War research, and veterans respond positively, but VA does not deliver. The Secretary committed up to $20 million dollars in 2004, but only a handful of projects were actually funded that year—about half related to stress. Later, the Secretary committed up to $15 million in new Gulf War illness research for FY2005, and a new center to study treatments for these conditions. And VA, again, has not delivered. 2005 has come and gone, and all we have seen is smokescreen attempt by VA ORD to make it appear that they have spent about $20 million in FY2005 and FY2006 for GWI research.

VA may report similar numbers when they testify at the Congressional hearing today. But the truth is, very little of the 2005 "Gulf War Research" funding was for any new projects, as promised by the Secretary, and very few of the new projects relate specifically to Gulf War illness or Gulf War veterans. VA has made public commitments, but neither the funding nor the promised new direction in Gulf War research has materialized. Ill Gulf War veterans are left pretty much where they started in 1995, with no improvements in understanding or treating Gulf War illnesses, and with nothing on the research horizon at VA that offers hope of better things to come.

The NGWRC believes entrenched bureaucrats under Secretary Nicholson have not upheld the research promises made by Secretary Principi. Secretary Nicholson must take charge of this issue and direct his Office of Research and Development to spend the money promised for Gulf War- related research and to establish the Treatment Centers.

Thanks to you, Mr. Chairman, and many of your colleagues, veterans now know that human studies of ALS, brain cancer and neurological impairments are scientifically linked with deployment to the Gulf War. We are also seeing higher rates of Multiple Sclerosis and Parkinson's disease in Gulf War veterans that needs immediate investigation and research.

Another important emerging area of animal research are studies of inhaled DU and implanted DU fragments, which are beginning to tell us about carcinogenic and possible brain effects of DU. Animal studies have also shown long-term debilitating effects of low-level sarin exposure and the synergistic effects of combinations of Gulf War-related exposures. The examples of animal research listed above, cannot be done in humans, and illustrates the importance of animal studies and their impact on understanding the exposures.

When Federal research is directed towards valid non-stress studies, it has provided very important breakthroughs that have helped us understand why Gulf War veterans are ill.

Mr. Chairman, our testimony about Gulf War veterans is not an academic exercise. The record shows DoD and VA failed Gulf War veterans. We cannot allow the nation or the VA to abandon 1991 Gulf War veterans nor should we pit the healthcare and research needs of 1991 Gulf War veterans against the needs of this wars returning veteran. 1991 Gulf War veterans had very unique exposures that need investigation and research and recent returning veterans will also require a unique focus to address their needs and the consequence of their war.

With a war escalating now in the Middle East, the U.S. has deployed more than 1.1 million soldiers, sailors, airmen and marines in Operation Iraqi Freedom and Operation Enduring Freedom. With great sorrow, I report to you that DoD and VA are not prepared for the return of these veterans and have failed ours.

A new generation of Iraq war and Afghanistan war veterans will not fare much better than we did. DoD failed to conduct pre-deployment exams on nearly 300,000 deploying service members, and DoD is not monitoring or refuses to release data on Depleted Uranium (DU) contamination on the battlefield. DoD is not monitoring Lariam use by indicating dosage in service member's medical records, and DoD still wants to inoculate troops with the experimental anthrax vaccine but has stopped monitoring adverse reactions and medical consequences of receiving the vaccine.

Congress must order DoD and VA to collect data on these new war veterans and provide quarterly reports to Congress so you may properly perform your oversight duties. If we fail to act now, I believe that another generation of veterans will be sitting before this committee in a few years demanding to know why veterans groups, Congress, and the Administration failed them.

The Nation cannot now abandon our war nor can we afford to be unprepared for the new veteran.

In closing, I would like to read an excerpt from the book "The Veteran Comes Back" printed in 1944. This book deals with WW1 and WW2 veteran's issues and is recommended reading for anyone who deals with war veterans.

Page number 184 – Veterans believe in Action – Not Talk

"Officers and soldiers feel themselves above argument with its un-avoidable delays and compromise with its necessary hypocrisies. It is action that counts for the soldier; in war it is often better to do something foolish than to do nothing at all."

"When the veteran, the Army-made man, return to civilian society, he understands conflict perfectly, compromises less well, dislikes discussion and

argument hardly at all. He wants action, dislikes talk, distrust talkers. He is intolerant of the hypocrisies without which politics is impossible.

Let us admit that the veteran, this man disgusted with politics and impatient of argument, has a real, a just grievance – indeed a whole series of grievances. Without that admission we cannot understand, evaluate, or predict the veteran's behavior. He comes to believe he has been swindled and that belief is rarely without some foundation in fact.

Mr Chairman for Gulf War veterans the time for talk is over. The science is in and can be acted upon today. Some veterans didn't survive the war of attrition and delay but for those remaining, now is the time for action.

Supporting documents for the testimony of

Stephen L. Robinson

Executive Director

National Gulf War Resource Center.

This is the printer-friendly version of:

Public Statements

Speaker: President George W. Bush

Title: Our Debt of Honor

Location: Manchester, NH

Date: 11/10/1999

Tomorrow our nation pays tribute to all of those who have served in uniform, and especially those who never came back. If I may, I'd like to honor one in particular right now – a man with us here whose career has been exemplary, and whose sacrifice has been great.

Sergeant Major Gus Schunemann, a son of Manchester, volunteered for World War Two at the age of 19. He served with distinction at San Pietro, at Monte Cassino, and at Anzio – retiring in 1971. In 1970, Sergeant Major and Mrs. Schunemenn – Rita – lost their eldest son in Vietnam. They are a credit to this group, and a credit to the armed services. I salute them for what they have given to this country, and for what they have lost.

Whatever it was about this state that produced men like the Sergeant Major and his son – whatever it was about America – that thing is sacred. We must never lose it. In our own lives, we must always honor it.

Americans this week rededicate ourselves to that duty of memory. Behind each name we remember is a hero's story. They are stories of daring attacks, impossible rescues and last ditch stands.

They are stories of hopeless odds and stubborn spirit and terrible injuries. From across the world and across the years, the courage in these stories still flashes; the honor still glows. Each action was beyond the call of duty, leaving a debt beyond our ability to repay.

True courage, it's said, is the most generous of the virtues. It elevates ideals over self and duty over comfort.

It leads young men and women to risk everything they have, everything they value, for a future they may not see. And it points to the greatest truth we can know: That love without cost, without sacrifice, is meaningless.

And it is also the lesson of Veterans Day, when we pause, in busy lives, to remember the price of liberty, measured in young lives that ended so suddenly, so tragically, so very far from home.

That grief has touched every city, every town, nearly every family in this country.

It is written on countless monuments, some green with age, some that will be covered tomorrow with flowers and tears, like that long, black wall in Washington.

Those of us who benefit from this sacrifice face a question: What do we owe the brave?

It is our first duty to remember what they have done. And that should not be hard, because it is one of the greatest stories of human history. Americans won world wars and a cold war. Kids fresh from farms and tenements humbled history's worst tyrants.

They opened death camps and emptied Gulags. Their character was tested in death marches and jungle stalemates. And, in the end, they won an epic

struggle – the struggle of a century—to save liberty itself.

We carve our thanks into stone. We stamp it into medals. We carefully tend to vast fields of white crosses and Stars of David. But it is even more important to pass stories of American courage and character to the next generation. To capture their imaginations. To raise a monument in their hearts. It is the way our democracy renews its promise, by celebrating American heroes and American values, without hesitation and without apology. Let us resolve to teach America's story to America's children.

First we remember. But second, We must renew a commitment, in our generation, with our challenges, to the pride and power and purpose of America. We must act worthy of our history – worthy of these men and women and their sacrifice – by writing new chapters of American greatness in a new century that is our charge.

New threats are replacing old enemies. Unstable dictators seek weapons of mass destruction. Regional power grabs become global crises.

We navigate through mines in the mist. And it is still America that preserves the peace. Our nation still determines the future of freedom. America is still a bright signal in a dark night.

Those who man the lighthouse of freedom ask little of our nation in return. But what they ask our nation must provide: a coherent vision of America's duties, a clear military mission in time of crisis, and, when sent in harm's way, the best support and equipment our nation can supply.

With these things, they never fail us. Without these things, we have failed them.

Let us resolve never to multiply our missions while cutting our capabilities. Let us resolve to restore a belief in American interests, American character and American destiny. And let us resolve to keep faith with our past by being vigilant in our time.

Our laws, too, must reflect gratitude.

To many veterans, it seems like they are remembered in Washington only on Veterans Day. Speeches are all well and good, but daily advocacy is needed in such issues as health care and compensation claims.

Health care for veterans is an often complicated and bureaucratic process, involving too many delays and uncertainties in coverage. Disability compensation claims can be an even longer ordeal, taking on average 165 days to complete.

So chaotic is the process that there is now a backlog of nearly half a million claims, a fourth of them involving lengthy appeals. And when the claims have been adjudicated and a decision finally made, a third of the decisions contain errors.

This is no way to treat any citizen, much less any veteran of the American armed forces. It is no way for government to discharge one of its most sacred commitments.

Soldiers once ordered by their government to stand in the line of fire should not now be ordered to stand in line at the nearest federal bureaucracy, waiting with hat in hand.

The veterans health-care system and the claims process need an

overhauling from top to bottom. It needs to be modernized, so that claims are handled in a fair and timely fashion.

Veterans need advocates in the Veterans Administration, people sympathetic to their interests instead of suspicious. If I am elected, that is the kind of veterans official I intend to appoint.

This applies to veterans of the Gulf War, too. They should not have to go to elaborate lengths to prove that they are ill, just because their malady has yet to be fully explained.

A 1994 law was passed to grant them the presumption of disability. Yet even now they are met with skeptical looks and a paper-shuffling excuses for withholding coverage.

If I have anything to say about it, all that is going to end. In the military, when you are called to account for a mistake, you are expected to give one simple answer: "No excuse, sir."

And that should be the attitude of any government official who fails to make good on our public responsibilities to veterans. There is no excuse for it.

America's veterans today ask only that government honor its commitments as they honored theirs. They ask that their interests be protected, as they protected their country's interests in foreign lands.

These are the ways to help repay our debt of honor to veterans.

There is an inscription on the Scottish National War Memorial which reads, "The whole earth is the tomb of heroes, and their story is not graven in stone over their clay, but abides everywhere, without visible symbol, woven into the stuff of other men's lives."

We dedicate ourselves tonight to the memory of the bravest of the brave – to remember them in our time, for all time.

Yet the greatest monument to the courage of Americans is the world they saved and shaped. And their story is not written in stone, it is woven into the lives of everyone who loves freedom.

And so we remember – as Americans will remember through our history – the heroes who saved a century.

Thank you.

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Mr. SHAYS. Thank you. I want to thank both Mr. Woods and you, Mr. Robinson, for very thoughtful presentations. Thank you.

Mr. Binns, thank you for your service as chairman of the Research Advisory Committee on Gulf War Veterans Illnesses. It is a privilege to have you here. And I want to make sure your statement is fully on the record. Thank you.

STATEMENT OF JIM BINNS

Mr. BINNS. Thank you, Mr. Chairman, members of the subcommittee. For nearly 4 years, I have had the privilege of chairing the Research Advisory Committee on Gulf War Veterans Illnesses.

In the same 1998 law that established the Research Advisory Committee, Congress directed the Department of Veterans Affairs to contract with the National Academy of Sciences. The Academy's Institute of Medicine [IOM], was to review the scientific literature regarding the substances to which troops were exposed in the Gulf, to determine if these substances are associated with an increased risk of illness.

These reports were to be used by the Secretary of Veterans Affairs in determining whether an illness should be presumed service-connected, and thus trigger veterans' benefits.

I regret to inform you that for 7 years, VA and IOM staff have subverted the will of Congress and misled the Secretary of Veterans Affairs regarding scientific research governing veterans' benefits.

The law provided that the National Academy of Sciences shall determine whether a statistical association exists between exposure to the agent and the illness; the increased risk of the illness among human or animal populations exposed to the agent; and whether a plausible biological mechanism or other evidence of a causal relationship exists.

Notice, please, that the statute speaks to the increased risk of the illness among human or animal populations. It is not just about human health effects and the implications of animal research on humans. It is equally concerned with animal health effects, per se. Congress recognized that research on the health effects of hazardous substances necessarily is conducted primarily in animals.

The statute went on to provide that the Secretary of Veterans Affairs should consider animal studies in determining whether a presumption of service connection is warranted. He was to consider the exposure in humans or animals to an agent, and the occurrence of a diagnosed or undiagnosed illness in humans or animals.

When the first IOM report was conducted under the law, however, animal studies were omitted from the standard for determining an association. The report states: "For its evaluation and categorization of the degree of association between each exposure and a human health effect, however, the committee only used evidence from human studies." The authors of the report went on to say—and you will no doubt hear today—"But we did consider animal studies. We considered them for biological plausibility."

But under their methodology, biological plausibility does not even come into play unless there has been a previous finding of an association based exclusively on human studies.

The salient fact is that they did not consider animal health effects in determining whether an association exists between an exposure and an illness, as required by law, and the only question that matters in the determination of benefits.

To express conclusions as to whether an association exists, the authors set up five categories of association. Each substance was ranked according to these categories. The authors offered the following explanation of where the categories came from: "The categories closely resemble those used by several IOM committees that evaluated herbicides used in Vietnam and other substances because they have gained wide acceptance for more than a decade by Congress, government agencies, researchers, and veteran groups."

It is revealing to compare a category of association used in the Vietnam studies with the same category used in the first Gulf war report, and all subsequent reports.

Vietnam: "Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between herbicides and the outcome in studies in which chance, bias, and confounding could be ruled out."

Gulf war: "Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between an exposure to a specific agent and a health outcome in human studies in which chance, bias, and confounding could be ruled out." The Gulf war category does indeed closely resemble the Vietnam category. It tracks it almost precisely, with the exception of a single word. The word "human" has been inserted in the Gulf war category.

Like the earlier smokescreen regarding biological plausibility, this change was no accident. It was a deliberate act to subvert the intent of Congress. And it has been successful to this moment. It has been the straightjacket into which every IOM committee has been put when asked to review Gulf war research.

The law also said that the IOM was to consider combinations of exposures; and they haven't. The law said they were supposed to consider undiagnosed illnesses; and they haven't.

The most egregious example of this distortion involved recent animal studies on the nerve gas Sarin, which showed that, contrary to previous scientific belief, low-level exposures could produce long-term effects on the nervous and immune systems.

Then, VA Secretary Principi wrote the Institute of Medicine, "Recently a number of new studies have been published on the effects of Sarin on laboratory animals." He asked the IOM to report back on whether the research affected earlier IOM conclusions regarding "the long-term health consequences of exposure to low levels of Sarin."

Last year, the IOM delivered its report. The report did not consider animal studies in the all-important categories of association, even though new animal studies were the only reason for doing the report. Not surprisingly, it found no evidence of association.

This year, VA initiated three new IOM reports, which are underway at this moment. They were not reviewed by the Research Advisory Committee, as required by the 1998 statute. One purports to be a broad review of Gulf war illnesses literature: "An IOM com-

mittee will review, evaluate, and summarize the peer-reviewed scientific and medical literature to determine what this information taken together can tell us about the health status of Gulf War veterans." Again, however, the study design excludes animal studies.

These distorted IOM reports are being used widely by the Department of Veterans Affairs. On September 15th, VA Undersecretary of Health, Dr. Jonathan Perlin, sent an information letter to VA doctors who treat Gulf war veterans. He assured the doctors that, "A 2000 congressionally mandated review and a 2004 update conducted by the IOM concluded, based upon their review of a large body of scientific literature, that the evidence did not support any long-term health effects following sub-clinical Sarin exposure."

In summary, this fraud has gone on since 1998, and continues to go on. It has defied the will of Congress. It has distorted the workings of the Institute of Medicine. It has denied the Secretary of Veterans Affairs accurate information on which to determine veterans' benefits. It has misled veterans and their doctors. Most tragically, it has misdirected researchers down blind alleys and away from paths that might have led to treatments for these debilitating illnesses.

Mr. Chairman, the Gulf war was the major military conflict of the United States in the last quarter of the 20th century; 697,000 Americans served. According to the Department of Veterans Affairs' own most recent study, 25 percent of them are ill with chronic multi-symptom illnesses. That means that more Gulf veterans are ill than all the American troops in Iraq today.

But no one ever hears about it. No one knows about it. No one does anything about it.

Why? Because of this. Because of the people who did this, and who are perpetuating it today; who undermine the Secretary's research commitments.

I ask myself: What kind of country are we living in, where we send men and women to war, and government officials treat them like this when they return?

Mr. Chairman, I urge Congress to use every power at its command to investigate this matter and ensure that the persons responsible are removed from positions of authority and punished. Until they are, there will be no meaningful progress on Gulf war illnesses research to improve the lives of ill veterans.

[The prepared statement of Mr. Binns follows:]

Testimony of James Binns
Chairman, Research Advisory Committee on Gulf War Veterans Illnesses
U.S. House of Representatives Committee on Government Reform
Subcommittee on National Security, Veterans Affairs, and International Relations
November 15, 2005

Mr. Chairman, Members of the Committee, for nearly four years I have had the privilege of chairing the Research Advisory Committee on Gulf War Veterans Illnesses. In the same 1998 law that established the Research Advisory Committee, Congress directed the Department of Veterans Affairs to contract with the National Academy of Sciences. The Academy's Institute of Medicine, the IOM, was to review the scientific literature regarding substances to which troops were exposed in the Gulf to determine if these substances are associated with an increased risk of illness. These reports were to be used by the Secretary of Veterans Affairs in determining whether such an illness should be presumed service-connected and thus trigger veterans benefits.

I regret to inform you that for seven years VA and IOM staff have subverted the will of Congress and misled the Secretary of Veterans Affairs regarding scientific research governing veterans benefits.

Staff shaped the methodology of the reports, so that scientists who served on IOM committees were not permitted to consider an essential category of research mandated by law.

The law provided that:

"The National Academy of Sciences shall determine ...

(A) whether a statistical association exists between exposure to the agent ... and the illness . . .

(B) the increased risk of the illness among human or animal populations exposed to the agent ... and

(C) whether a plausible biological mechanism or other evidence of a causal relationship exists ..."

38 USC Sec. 1117, note Sec. 1603(e) [emphasis added] [Tab 1]

The statute went on to provide that the Secretary of Veterans Affairs should consider animal studies in determining whether a presumption of service connection is warranted. He was to consider "the exposure in humans or animals" to an agent and "the occurrence of a diagnosed or undiagnosed illness in humans or animals."

38 USC Sec. 1118 (b)(1)(B) [emphasis added] [Tab 2]

When the first IOM report was conducted under the law, however, animal studies were omitted from the standard for determining an association. The report states:

"For its evaluation and categorization of the degree of association between each exposure and a human health effect, however, the committee only used evidence from human studies."

Gulf War and Health Volume 1, p. 72 [Tab 3]

The authors of the report went on to say, and you will no doubt hear today, "But we did consider animal studies. We considered them for biological plausibility."

But under their methodology, "biological plausibility" does not even come into play unless there has been a previous finding of an association, based exclusively on human studies. [Tab 4] The salient fact is that they did not consider animal studies in determining whether an association exists between an exposure and an illness, as required by law, and the only question that matters in the determination of benefits.

To express conclusions as to whether an association exists, the authors set up five "Categories of Association." [Tab 4] Each substance was ranked according to these categories.

The authors of the report offered the following explanation of where the categories came from:

"The categories closely resemble those used by several IOM committees that evaluated . . . herbicides used in Vietnam [and other substances]...because they have gained wide acceptance for more than a decade by Congress, government agencies, researchers, and veteran groups." Gulf War and Health, Volume 1, p. 83 [Tab 5]

It is revealing to compare a category of association used in the Vietnam studies with the same category used in the first Gulf War report (and all subsequent reports).

Vietnam:

"Sufficient Evidence of an Association. Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between herbicides and the outcome in studies in which chance, bias, and confounding could be ruled out ..."
Vietnam and Agent Orange: 1996 Update [emphasis added] [Tab 6]

Gulf War:

"Sufficient Evidence of an Association. Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between an exposure to a specific agent and a heath outcome in human studies in which chance, bias, and confounding could be ruled out . . ."
Gulf War and Health: Volume I, p. 83 [emphasis added] [Tab 6]

The Gulf War category does indeed "closely resemble" the Vietnam category. It tracks it almost precisely . . . with the exception of a single word. The word "human" has been inserted in the Gulf War category.

Like the earlier smokescreen regarding biological plausibility, this change was no accident. It was a deliberate act to subvert the intent of Congress. And it has been

successful to this moment. It has been the straightjacket into which every IOM committee has been put when asked to review Gulf War research.

This straightjacket has immense consequences, because animal studies are the major source of new scientific knowledge on these substances. The report of the Research Advisory Committee issued last year lists sixteen studies on low-level exposures to sarin, and twenty-eight studies on combinations of exposures – most of them done in the last few years, and all of them done in animals. [Tab 7]

The law also said that the IOM was to consider combinations of exposures, and they haven't. The law said they were supposed to consider undiagnosed illnesses, and they haven't. [Tab 1, Tab 13]

The most egregious example of this distortion involved recent animal studies on the nerve gas sarin, which showed that, contrary to previous belief, low level exposures, below the level required to produce symptoms at the time of exposure, could produce long-term effects on the nervous and immune systems. Then-VA Secretary Principi wrote the Institute of Medicine: "Recently a number of new studies have been published on the effects of sarin on laboratory animals." He asked the IOM to report back on whether the research affected earlier IOM conclusions regarding the "long-term health consequences of exposure to low levels of sarin." Gulf War Review, Vol. 11, No. 2, March 2003, p. 4 [Tab 8]

Last year, the IOM delivered its report. The report did not consider animal studies in the all-important categories of association, even though new animal studies were the only reason for doing the report. Not surprisingly, it found no evidence of association. [Tab 9]

This year, the VA initiated three new IOM Gulf War reports, which are underway at this moment. They were not reviewed by the Research Advisory Committee, as required by the 1998 statute. One purports to be a broad review of Gulf War illnesses literature: "An IOM Committee will review, evaluate, and summarize the peer-reviewed scientific and medical literature to determine what this information taken together can tell us about the health status of Gulf War veterans." [Tab 10]

Again, however, the study design excludes animal studies.

It also excludes government Gulf War reports, such as the comprehensive 2003 Department of Defense Final Report on Pesticides, which concluded that "[i]t is likely that at least 41,000 servicemembers may have been overexposed to pesticides" and that "[o]verexposures to pesticides, particularly organophosphates and carbamates, may have contributed to the unexplained illnesses reported by some Gulf War veterans." [Tab 11]

These distorted IOM reports are being used widely by the Department of Veterans Affairs, not just for benefits determinations. On September 15, VA Undersecretary of Health, Dr. Jonathan Perlin, sent an information letter to VA doctors who treat Gulf

veterans who may have been exposed to low levels of sarin. He assured them that "[a] 2000 congressionally-mandated review and a 2004 update conducted by the IOM concluded, based upon their review of a large body of scientific literature . . ., that the evidence did not support any long-term health effects following sub-clinical sarin exposure." [Tab 12]

In summary, this fraud has gone on since 1998 and continues to go on. It has defied the will of Congress. It has distorted the workings of the Institute of Medicine. It has denied the Secretary of Veterans Affairs accurate information on which to determine benefits due ill veterans. It has misled veterans and their doctors.

Most tragically, it has misdirected researchers down blind alleys and away from paths that might have led to treatments for these debilitating illnesses.

Mr. Chairman, the Gulf War was the major military conflict of the United States in the last quarter of the twentieth century. Six hundred and ninety seven thousand Americans served. According to the Department of Veterans Affairs own most recent study, twenty-five percent of them are ill with chronic multisymptom illnesses. That means that more Gulf veterans are ill than all the American troops in Iraq today.

But no one ever hears about it. No one knows about it. No one does anything about it. Why? Because of this. Because of the people who did this, and who are perpetuating it today, who undermine the Secretary's research commitments.

I ask myself: what kind of country are we living in where we send men and women to war, and government officials treat them like this when they return?

Mr. Chairman, I urge Congress to use every power at its command to investigate this matter and ensure that the persons responsible are removed from positions of authority and punished. Until they are, there will be no meaningful progress on Gulf War illnesses research to improve the lives of ill veterans.

The IOM failed to follow the 1998 law in other material respects. The law directed the IOM to identify and consider the illnesses that have occurred in Gulf veterans "including diagnosed illnesses and undiagnosed illnesses." 38 USC Sec. 1117, note Sec. 1603(c)(1)(B) [Tab 1]

The IOM reports have never addressed undiagnosed illnesses. These are the constellation of symptoms commonly referred to as "Gulf War illnesses" or "Gulf War Syndrome" that are the central reason why this legislation exists and which affect at least 25 percent of those who served in the Gulf War, as shown by multiple studies. The second IOM Gulf War report acknowledged that the Committee was not charged with addressing "nonspecific illnesses that lack defined diagnoses . . .," contradicting the law. Gulf War and Health Volume 2, p. 13. [Tab 13]

The law also defines toxic agents to include combinations of exposures ("whether through exposure singularly or in combination.") 38 USC Sec. 1117, note Sec. 1605(1) [Tab A] The second IOM report also acknowledged that "exposure to multiple agents" was not within the Committee's charge. Gulf War and Health Volume 2, p. 13 [Tab 13]

The law provides the following standard for the Secretary to use in determining whether a positive association exists, and thus whether a presumption of service connection is warranted:

"An association between the occurrence of an illness in humans or animals and exposure to an agent, hazard, or medicine or vaccine shall be considered to be positive . . . if the credible evidence for the association is equal to or outweighs the credible evidence against the association." 38 USC Sec. 1118(b)(3) [Tab 2]

The IOM "categories of association" place a substantially higher level of proof than the statute requires.

"Sufficient Evidence of an Association. Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between an exposure to a specific agent and a heath outcome in human studies in which chance, bias, and confounding could be ruled out . . ."

Gulf War and Health: Volume I [Tab 6]

In summary, VA and the IOM have repeatedly and deliberately disregarded explicit statutory direction in implementing the law.

I urge Congress to direct VA to enter into a new contract with the Institute of Medicine to prepare new reports on the association between the substances to which veterans were exposed and diagnosed and undiagnosed illnesses, in accordance with the statute in all respects. Alternatively, I recommend that Congress direct VA to enter into a contract with an alternate not-for-profit scientific organization that is not a part of the government and has "expertise and objectivity comparable to that of the National Academy of Sciences," as contemplated by the statute in the event that an acceptable agreement could not be reached with the National Academy of Sciences. 38 USC Sec. 1117, note Sec. 1603(k)(1) [Tab 1]

Finally, I recommend that Congress designate that VA funding for Gulf War illnesses research should go to a qualified nonfederal institution to develop and manage the research portfolio, both through research conducted in-house and through external research by VA and non-VA researchers selected on the basis of contracts and/or competition. An example of such an institution is the Boston University Center for Interdisciplinary Research in Environmental Exposures and Health. It is apparent that there is a conflict of interest for VA to manage research in an area where major benefits determinations are also at stake.

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38 USC Sec. *1117* 01/19/04

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TITLE 38 - VETERANS' BENEFITS

PART II - GENERAL BENEFITS

CHAPTER 11 - COMPENSATION FOR SERVICE-CONNECTED DISABILITY OR DEATH

SUBCHAPTER II - WARTIME DISABILITY COMPENSATION

AGREEMENT WITH NATIONAL ACADEMY OF SCIENCES REGARDING TOXIC DRUGS AND ILLNESSES ASSOCIATED WITH GULF WAR

Pub. L. 105-277, div. C, title XVI, Sec. 1603-1605, Oct. 21, 1998, 112 Stat. 2681-745 to 2681-748, as amended by Pub. L. 107-103, title II, Sec. 202(d)(2), Dec. 27, 2001, 115 Stat. 989, provided that:

"SEC. 1603. AGREEMENT WITH NATIONAL ACADEMY OF SCIENCES.

"(a) Purpose. - The purpose of this section is to provide for the National Academy of Sciences, an independent nonprofit scientific organization with appropriate expertise, to review and evaluate the available scientific evidence regarding associations between illnesses and exposure to toxic agents, environmental or wartime hazards, or preventive medicines or vaccines associated with Gulf War service.

"(b) Agreement. - The Secretary of Veterans Affairs shall seek to enter into an agreement with the National Academy of Sciences for the Academy to perform the activities covered by this section. The Secretary shall seek to enter into the agreement not later than two months after the date of enactment of this Act [Oct. 21, 1998].

"(c) Identification of Agents and Illnesses. - (1) Under the agreement under subsection (b), the National Academy of Sciences shall -

"(A) identify the biological, chemical, or other toxic agents, environmental or wartime hazards, or preventive medicines or vaccines to which members of the Armed Forces who served in the Southwest Asia theater of operations during the Persian Gulf War may have been exposed by reason of such service; and

"(B) identify the illnesses (including diagnosed illnesses and undiagnosed illnesses) that are manifest in such members.

"(2) In identifying illnesses under paragraph (1)(B), the Academy shall review and summarize the relevant scientific evidence regarding illnesses among the members described in paragraph (1)(A) and among other appropriate populations of individuals, including mortality, symptoms, and adverse reproductive health outcomes among such members and individuals.

"(d) Initial Consideration of Specific Agents. - (1) In

identifying under subsection (c) the agents, hazards, or preventive medicines or vaccines to which members of the Armed Forces may have been exposed for purposes of the first report under subsection (i), the National Academy of Sciences shall consider, within the first six months after the date of enactment of this Act [Oct. 21, 1998], the following:

"(A) The following organophosphorous pesticides:

"(i) Chlorpyrifos.

"(ii) Diazinon.

"(iii) Dichlorvos.

"(iv) Malathion.

"(B) The following carbamate pesticides:

"(i) Proxpur.

"(ii) Carbaryl.

"(iii) Methomyl.

"(C) The carbamate pyridostigmine bromide used as nerve agent prophylaxis.

"(D) The following chlorinated hydrocarbon and other pesticides and repellents:

"(i) Lindane.

"(ii) Pyrethrins.

"(iii) Permethrins.

"(iv) Rodenticides (bait).

"(v) Repellent (DEET).

"(E) The following low-level nerve agents and precursor compounds at exposure levels below those which produce immediately apparent incapacitating symptoms:

"(i) Sarin.

"(ii) Tabun.

"(F) The following synthetic chemical compounds:

"(i) Mustard agents at levels below those which cause immediate blistering.

"(ii) Volatile organic compounds.

"(iii) Hydrazine.

"(iv) Red fuming nitric acid.

"(v) Solvents.

"(vi) Uranium.

"(G) The following ionizing radiation:

"(i) Depleted uranium.

"(ii) Microwave radiation.

"(iii) Radio frequency radiation.

"(H) The following environmental particulates and pollutants:

"(i) Hydrogen sulfide.

"(ii) Oil fire byproducts.

"(iii) Diesel heater fumes.

"(iv) Sand micro-particles.

"(I) Diseases endemic to the region (including the following):

"(i) Leishmaniasis.

"(ii) Sandfly fever.

"(iii) Pathogenic escherechia coli.

"(iv) Shigellosis.

"(J) Time compressed administration of multiple live, 'attenuated', and toxoid vaccines.

"(2) The consideration of agents, hazards, and medicines and vaccines under paragraph (1) shall not preclude the Academy from identifying other agents, hazards, or medicines or vaccines to which members of the Armed Forces may have been exposed for purposes of any report under subsection (i).

"(3) Not later than six months after the date of enactment of this Act [Oct. 21, 1998], the Academy shall submit to the

designated congressional committees a report specifying the agents, hazards, and medicines and vaccines considered under paragraph (1).

"(e) Determinations of Associations Between Agents and Illnesses. - (1) For each agent, hazard, or medicine or vaccine and illness identified under subsection (c), the National Academy of Sciences shall determine, to the extent that available scientific data permit meaningful determinations -

"(A) whether a statistical association exists between exposure to the agent, hazard, or medicine or vaccine and the illness, taking into account the strength of the scientific evidence and the appropriateness of the scientific methodology used to detect the association;

"(B) the increased risk of the illness among human or animal populations exposed to the agent, hazard, or medicine or vaccine; and

"(C) whether a plausible biological mechanism or other evidence of a causal relationship exists between exposure to the agent, hazard, or medicine or vaccine and the illness.

"(2) The Academy shall include in its reports under subsection (i) a full discussion of the scientific evidence and reasoning that led to its conclusions under this subsection.

"(f) Review of Potential Treatment Models for Certain Illnesses. - Under the agreement under subsection (b), the National Academy of Sciences shall separately review, for each chronic undiagnosed illness identified under subsection (c)(1)(B) and for any other chronic illness that the Academy determines to warrant such review, the available scientific data in order to identify empirically valid models of treatment for such illnesses which employ successful treatment modalities for populations with similar symptoms.

"(g) Recommendations for Additional Scientific Studies. - (1) Under the agreement under subsection (b), the National Academy of Sciences shall make any recommendations that it considers appropriate for additional scientific studies (including studies relating to treatment models) to resolve areas of continuing scientific uncertainty relating to the health consequences of exposure to toxic agents, environmental or wartime hazards, or preventive medicines or vaccines associated with Gulf War service.

"(2) In making recommendations for additional studies, the Academy shall consider the available scientific data, the value and relevance of the information that could result from such studies, and the cost and feasibility of carrying out such studies.

"(h) Subsequent Reviews. - (1) Under the agreement under subsection (b), the National Academy of Sciences shall conduct on a periodic and ongoing basis additional reviews of the evidence and data relating to its activities under this section.

"(2) As part of each review under this subsection, the Academy shall -

"(A) conduct as comprehensive a review as is practicable of the evidence referred to in subsection (c) and the data referred to in subsections (e), (f), and (g) that became available since the last review of such evidence and data under this section; and

"(B) make determinations under the subsections referred to in subparagraph (A) on the basis of the results of such review and all other reviews previously conducted for purposes of this section.

"(i) Reports. - (1) Under the agreement under subsection (b), the National Academy of Sciences shall submit to the committees and officials referred to in paragraph (5) periodic written reports regarding the Academy's activities under the agreement.

"(2) The first report under paragraph (1) shall be submitted not later than 18 months after the date of enactment of this Act [Oct. 21, 1998]. That report shall include -

"(A) the determinations and discussion referred to in subsection (e);

"(B) the results of the review of models of treatment under subsection (f); and

"(C) any recommendations of the Academy under subsection (g).

"(3) Reports shall be submitted under this subsection at least once every two years, as measured from the date of the report under paragraph (2).

"(4) In any report under this subsection (other than the report under paragraph (2)), the Academy may specify an absence of meaningful developments in the scientific or medical community with respect to the activities of the Academy under this section during the 2-year period ending on the date of such report.

"(5) Reports under this subsection shall be submitted to the following:

"(A) The designated congressional committees.

"(B) The Secretary of Veterans Affairs.

"(C) The Secretary of Defense.

"(j) Sunset. - This section shall cease to be effective on October 1, 2010.

"(k) Alternative Contract Scientific Organization. - (1) If the Secretary is unable within the time period set forth in subsection (b) to enter into an agreement with the National Academy of Sciences for the purposes of this section on terms acceptable to the Secretary, the Secretary shall seek to enter into an agreement for purposes of this section with another appropriate scientific organization that is not part of the Government, operates as a

not-for-profit entity, and has expertise and objectivity comparable to that of the National Academy of Sciences.

"(2) If the Secretary enters into an agreement with another organization under this subsection, any reference in this section and section 1118 of title 38, United States Code (as added by section 1602(a)), to the National Academy of Sciences shall be treated as a reference to such other organization.

"SEC. 1604. REPEAL OF INCONSISTENT PROVISIONS OF LAW.

"In the event of the enactment, before, on, or after the date of the enactment of this Act [Oct. 21, 1998], of section 101 of the Veterans Programs Enhancement Act of 1998 [Pub. L. 105-368, 112 Stat. 3317], or any similar provision of law enacted during the second session of the 105th Congress requiring an agreement with the National Academy of Sciences regarding an evaluation of health consequences of service in Southwest Asia during the Persian Gulf War, such section 101 (or other provision of law) shall be treated as if never enacted, and shall have no force or effect.

"SEC. 1605. DEFINITIONS.

"In this title [enacting section 1118 of this title, amending this section and section 1113 of this title, and enacting this note and provisions set out as a note under section 101 of this title]:

"(1) The term 'toxic agent, environmental or wartime hazard, or preventive medicine or vaccine associated with Gulf War service' means a biological, chemical, or other toxic agent, environmental or wartime hazard, or preventive medicine or vaccine that is known or presumed to be associated with service in the Armed Forces in the Southwest Asia theater of operations during the Persian Gulf War, whether such association arises as a result of single, repeated, or sustained exposure and whether such association arises through exposure singularly or in combination.

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TITLE 38 - VETERANS' BENEFITS

PART II - GENERAL BENEFITS

CHAPTER 11 - COMPENSATION FOR SERVICE-CONNECTED DISABILITY OR DEATH

SUBCHAPTER II - WARTIME DISABILITY COMPENSATION

-HEAD-

Sec. 1118. Presumptions of service connection for illnesses associated with service in the Persian Gulf during the Persian Gulf War

-STATUTE-

(a)(1) For purposes of section 1110 of this title, and subject to section 1113 of this title, each illness, if any, described in paragraph (2) shall be considered to have been incurred in or aggravated by service referred to in that paragraph, notwithstanding that there is no record of evidence of such illness during the period of such service.

(2) An illness referred to in paragraph (1) is any diagnosed or undiagnosed illness that -

(A) the Secretary determines in regulations prescribed under this section to warrant a presumption of service connection by reason of having a positive association with exposure to a biological, chemical, or other toxic agent, environmental or wartime hazard, or preventive medicine or vaccine known or presumed to be associated with service in the Armed Forces in the

Southwest Asia theater of operations during the Persian Gulf War; and

(B) becomes manifest within the period, if any, prescribed in such regulations in a veteran who served on active duty in that theater of operations during that war and by reason of such service was exposed to such agent, hazard, or medicine or vaccine.

(3) For purposes of this subsection, a veteran who served on active duty in the Southwest Asia theater of operations during the Persian Gulf War and has an illness described in paragraph (2) shall be presumed to have been exposed by reason of such service to the agent, hazard, or medicine or vaccine associated with the illness in the regulations prescribed under this section unless there is conclusive evidence to establish that the veteran was not exposed to the agent, hazard, or medicine or vaccine by reason of such service.

(4) For purposes of this section, signs or symptoms that may be a manifestation of an undiagnosed illness include the signs and symptoms listed in section 1117(g) of this title.

(b)(1)(A) Whenever the Secretary makes a determination described in subparagraph (B), the Secretary shall prescribe regulations providing that a presumption of service connection is warranted for the illness covered by that determination for purposes of this section.

(B) A determination referred to in subparagraph (A) is a determination based on sound medical and scientific evidence that a positive association exists between -

(i) the exposure of humans or animals to a biological, chemical, or other toxic agent, environmental or wartime hazard,

or preventive medicine or vaccine known or presumed to be associated with service in the Southwest Asia theater of operations during the Persian Gulf War; and

(ii) the occurrence of a diagnosed or undiagnosed illness in humans or animals.

(2)(A) In making determinations for purposes of paragraph (1), the Secretary shall take into account -

(i) the reports submitted to the Secretary by the National Academy of Sciences under section 1603 of the Persian Gulf War Veterans Act of 1998; and

(ii) all other sound medical and scientific information and analyses available to the Secretary.

(B) In evaluating any report, information, or analysis for purposes of making such determinations, the Secretary shall take into consideration whether the results are statistically significant, are capable of replication, and withstand peer review.

(3) An association between the occurrence of an illness in humans or animals and exposure to an agent, hazard, or medicine or vaccine shall be considered to be positive for purposes of this subsection if the credible evidence for the association is equal to or outweighs the credible evidence against the association.

(c)(1) Not later than 60 days after the date on which the Secretary receives a report from the National Academy of Sciences under section 1603 of the Persian Gulf War Veterans Act of 1998, the Secretary shall determine whether or not a presumption of service connection is warranted for each illness, if any, covered by the report.

(2) If the Secretary determines under this subsection that a presumption of service connection is warranted, the Secretary shall, not later than 60 days after making the determination, issue

proposed regulations setting forth the Secretary's determination.

(3)(A) If the Secretary determines under this subsection that a presumption of service connection is not warranted, the Secretary shall, not later than 60 days after making the determination, publish in the Federal Register a notice of the determination. The notice shall include an explanation of the scientific basis for the determination.

(B) If an illness already presumed to be service connected under this section is subject to a determination under subparagraph (A), the Secretary shall, not later than 60 days after publication of the notice under that subparagraph, issue proposed regulations removing the presumption of service connection for the illness.

(4) Not later than 90 days after the date on which the Secretary issues any proposed regulations under this subsection, the Secretary shall issue final regulations. Such regulations shall be effective on the date of issuance.

(d) Whenever the presumption of service connection for an illness under this section is removed under subsection (c) -

(1) a veteran who was awarded compensation for the illness on the basis of the presumption before the effective date of the removal of the presumption shall continue to be entitled to receive compensation on that basis; and

(2) a survivor of a veteran who was awarded dependency and indemnity compensation for the death of a veteran resulting from the illness on the basis of the presumption before that date shall continue to be entitled to receive dependency and indemnity compensation on that basis.

(e) Subsections (b) through (d) shall cease to be effective on September 30, 2011.

-SOURCE-

(Added Pub. L. 105-277, div. C, title XVI, Sec. 1602(a)(1), Oct. 21, 1998, 112 Stat. 2681-742; amended Pub. L. 107-103, title II, Sec. 202(b)(2), (d)(1), Dec. 27, 2001, 115 Stat. 989.)

-REFTEXT-

REFERENCES IN TEXT

Section 1603 of the Persian Gulf War Veterans Act of 1998, referred to in subsecs. (b)(2)(A)(i) and (c)(1), is section 1603 of Pub. L. 105-277, which is set out in a note under section 1117 of this title.

-MISC1-

AMENDMENTS

2001 - Subsec. (a)(4). Pub. L. 107-103, Sec. 202(b)(2), added par. (4).

Subsec. (e). Pub. L. 107-103, Sec. 202(d)(1), substituted "on September 30, 2011" for "10 years after the first day of the fiscal year in which the National Academy of Sciences submits to the Secretary the first report under section 1603 of the Persian Gulf War Veterans Act of 1998".

EFFECTIVE DATE OF 2001 AMENDMENT

Amendment by section 202(b)(2) of Pub. L. 107-103 effective Mar. 1, 2002, see section 202(c) of Pub. L. 107-103, set out as a note under section 1117 of this title.

-SECREF-

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 1113, 1117 of this title.



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studies often focus on one agent at a time, they more easily enable the study of chemical mixtures and their potential interactions.

Research on health effects of toxic substance includes animal studies that characterize absorption, distribution, metabolism, elimination, and excretion. Animal studies may examine acute (short-term) exposures or chronic (long-term) exposures. Animal research may focus on the mechanism of action (i.e., how the toxin exerts its deleterious effects at the cellular and molecular levels). Mechanism-of-action (or mechanistic) studies encompass a range of laboratory approaches with whole animals and in vitro systems using tissues or cells from humans or animals. Also, structure–activity relationships, in which comparisons are made between the molecular structure and chemical and physical properties of a potential toxin versus a known toxin, are an important source of hypotheses about mechanism of action.

In carrying out its charge, the committee used animal and other nonhuman studies in several ways, particularly as a marker for health effects that might be important for humans. If an agent, for example, was absorbed and deposited in specific tissues or organs (e.g., uranium deposition in bone and kidney), the committee looked especially closely for possible abnormalities at these sites in human studies.

One of the problems with animal studies, however, is the difficulty of finding animal models to study symptoms that relate to uniquely human attributes, such as cognition, purposive behavior, and the perception of pain. With the exception of fatigue, many symptoms reported by veterans (e.g., headache, muscle or joint pain) are difficult to study in standard neurotoxicological tests in animals (OTA, 1990).

For its evaluation and categorization of the degree of association between each exposure and a human health effect, however, the committee only used evidence from human studies. Nevertheless, the committee did use nonhuman studies as the basis for judgments about biologic plausibility, which is one of the criteria for establishing causation (see below).

Human Studies

Epidemiologic Studies

Epidemiology concerns itself with the relationship of various factors and conditions that determine the frequency and distribution of an infectious process, a disease, or a physiological state in human populations (Lilienfeld, 1978). Its focus on populations distinguishes it from other medical disciplines. Epidemiologic studies characterize the relationship between the agent, the environment, and the host and are useful for generating and testing hypotheses with respect to the association between exposure to an agent and health or disease. The following section describes the major types of epidemiologic studies considered by the committee.

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mittee evaluated the strength of the evidence for or against associations between health effects and exposure to the agents being studied.

Categories of Association

The committee used five previously established categories to classify the evidence for association between exposure to a specific agent and a health outcome. The categories closely resemble those used by several IOM committees that evaluated vaccine safety (IOM, 1991, 1994a), herbicides used in Vietnam (IOM, 1994b, 1996, 1999), and indoor pollutants related to asthma (IOM, 2000). Although the categories imply a statistical association, the committee had sufficient epidemiologic evidence to examine statistical associations for only one of the agents under study (i.e., depleted uranium), there was very limited epidemiologic evidence for the other agents examined (i.e., sarin, pyridostigmine bromide, and anthrax and botulinum toxoid vaccines). Thus, the committee based its conclusions on the strength and coherence of the data in the available studies. In many cases, these data distinguished differences between transient and long-term health outcomes related to the dose of the agent. Based on the literature, it became incumbent on the committee to similarly specify the differences between dose levels and the nature of the health outcomes. This approach led the committee to reach conclusions about long- and short-term health effects, as well as health outcomes related to the dose of the putative agents. The final conclusions expressed in Chapters 4–7 represent the committee's collective judgment. The committee endeavored to express its judgments as clearly and precisely as the available data allowed. The committee used the established categories of association from previous IOM studies, because they have gained wide acceptance for more than a decade by Congress, government agencies, researchers, and veteran groups.

- *Sufficient Evidence of a Causal Relationship.* Evidence is sufficient to conclude that a causal relationship exists between the exposure to a specific agent and a health outcome in humans. The evidence fulfills the criteria for sufficient evidence of an association (below) and satisfies several of the criteria used to assess causality: strength of association, dose–response relationship, consistency of association, temporal relationship, specificity of association, and biological plausibility.
- *Sufficient Evidence of an Association.* Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between an exposure to a specific agent and a health outcome in human studies in which chance, bias, and confounding could be ruled out with reasonable confidence.
- *Limited/Suggestive Evidence of an Association.* Evidence is suggestive of an association between exposure to a specific agent and a health outcome in humans, but is limited because chance, bias, and confounding could not be ruled out with confidence.

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• *Inadequate/Insufficient Evidence to Determine Whether an Association Does or Does Not Exist.* The available studies are of insufficient quality, consistency, or statistical power to permit a conclusion regarding the presence or absence of an association between an exposure to a specific agent and a health outcome in humans.

• *Limited/Suggestive Evidence of No Association.* There are several adequate studies, covering the full range of levels of exposure that humans are known to encounter, that are mutually consistent in not showing a positive association between exposure to a specific agent and a health outcome at any level of exposure. A conclusion of no association is inevitably limited to the conditions, levels of exposure, and length of observation covered by the available studies. In addition, the possibility of a very small elevation in risk at the levels of exposure studied can never be excluded.

These five categories cover different degrees or levels of association, with the highest level being sufficient evidence of a causal relationship between exposure to a specific agent and a health outcome. The criteria for each category incorporate key points discussed earlier in this chapter. A recurring theme is that an association is more likely to be valid if it is possible to reduce or eliminate common sources of error in making inferences: chance, bias, and confounding. Accordingly, the criteria for each category express varying degrees of confidence based upon the extent to which it has been possible to exclude these sources of error. To infer a causal relationship from a body of evidence, the committee relied on long-standing criteria for assessing causation in epidemiology (Hill, 1971; Evans, 1976).

COMMENTS ON INCREASED RISK OF ADVERSE HEALTH OUTCOMES AMONG GULF WAR VETERANS

As discussed in the beginning of this chapter, the committee reviewed the available scientific evidence in the peer-reviewed literature in order to draw conclusions about associations between the agents of interest and adverse health effects in all populations. The committee placed its conclusions in categories that reflect the strength of the evidence for an association between exposure to the agent and health outcomes. The committee could not measure the likelihood that Gulf War veterans' health problems are associated with or caused by these agents. To address this issue, the committee would need to compare the rates of health effects in Gulf War veterans exposed to the putative agents with the rates of those who were not exposed, which would require information about the agents to which individual veterans were exposed and their doses. However, as discussed throughout this report, there is a paucity of data regarding the actual agents and doses to which individual Gulf War veterans were exposed. Further, to answer questions about increased risk of illnesses in Gulf War veterans, it would also be important to know the degree to which any other differences be-

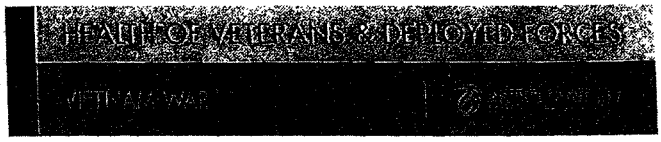
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mittee evaluated the strength of the evidence for or against associations between health effects and exposure to the agents being studied.

Categories of Association

The committee used five previously established categories to classify the evidence for association between exposure to a specific agent and a health outcome. The categories closely resemble those used by several IOM committees that evaluated vaccine safety (IOM, 1991, 1994a), herbicides used in Vietnam (IOM, 1994b, 1996, 1999), and indoor pollutants related to asthma (IOM, 2000). Although the categories imply a statistical association, the committee had sufficient epidemiologic evidence to examine statistical associations for only one of the agents under study (i.e., depleted uranium), there was very limited epidemiologic evidence for the other agents examined (i.e., sarin, pyridostigmine bromide, and anthrax and botulinum toxoid vaccines). Thus, the committee based its conclusions on the strength and coherence of the data in the available studies. In many cases, these data distinguished differences between transient and long-term health outcomes related to the dose of the agent. Based on the literature, it became incumbent on the committee to similarly specify the differences between dose levels and the nature of the health outcomes. This approach led the committee to reach conclusions about long- and short-term health effects, as well as health outcomes related to the dose of the putative agents. The final conclusions expressed in Chapters 4–7 represent the committee's collective judgment. The committee endeavored to express its judgments as clearly and precisely as the available data allowed. The committee used the established categories of association from previous IOM studies, because they have gained wide acceptance for more than a decade by Congress, government agencies, researchers, and veteran groups.

- *Sufficient Evidence of a Causal Relationship.* Evidence is sufficient to conclude that a causal relationship exists between the exposure to a specific agent and a health outcome in humans. The evidence fulfills the criteria for sufficient evidence of an association (below) and satisfies several of the criteria used to assess causality: strength of association, dose–response relationship, consistency of association, temporal relationship, specificity of association, and biological plausibility.
- *Sufficient Evidence of an Association.* Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between an exposure to a specific agent and a health outcome in human studies in which chance, bias, and confounding could be ruled out with reasonable confidence.
- *Limited/Suggestive Evidence of an Association.* Evidence is suggestive of an association between exposure to a specific agent and a health outcome in humans, but is limited because chance, bias, and confounding could not be ruled out with confidence.



Explanation of the Categories of Evidence

Sufficient Evidence of an Association

Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between herbicides and the outcome in studies in which chance, bias, and confounding could be ruled out with reasonable confidence. For example, if several small studies that are free from bias and confounding show an association that is consistent in magnitude and direction, there may be sufficient evidence of an association.

Limited or Suggestive Evidence of an Association

Evidence is suggestive of an association between herbicides and the outcome but is limited because chance, bias, and confounding could not be ruled out with confidence. For example, at least one high-quality study shows a positive association, but the results of other studies are inconsistent.

Inadequate or Insufficient Evidence To Determine Whether an Association Exists

The available studies are of insufficient quality, consistency, or statistical power to permit a conclusion regarding the presence or absence of an association. For example, studies fail to control for confounding, have inadequate exposure assessment, or fail to address latency.

Limited or Suggestive Evidence of *No* Association

Several adequate studies, covering the full range of levels of exposure that human beings are known to encounter, are consistent in not showing a positive association between any magnitude of exposure to herbicides and the outcome. A conclusion of "no association" is inevitably limited to the conditions, exposure, and length of observation covered by the available studies. *In addition, the possibility of a very small increase in risk at the exposure studied can never be excluded.*

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mittee evaluated the strength of the evidence for or against associations between health effects and exposure to the agents being studied.

Categories of Association

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- *Limited/Suggestive Evidence of an Association.* Evidence is suggestive of an association between exposure to a specific agent and a health outcome in humans, but is limited because chance, bias, and confounding could not be ruled out with confidence.

administered to sarin-exposed rats.[151] Also intriguing was a finding that low-level sarin exposure produced significantly reduced levels of corticosterone, an adrenal hormone generated in response to stressors.[151,182]

Table 7. Studies of Chronic Effects of Low-Dose Sarin Exposure in Animals

Study	Year	Animal Model	Major Finding
Burchfiel[44]	1976	monkey	Persistent effects on electroencephalograph readings
Husain[128]	1993	mouse	Delayed development of spinal cord lesions
Jones[149]	2000	rat	Chronic reduction in nicotinic ACh receptor binding in cerebral cortex
Kassa[165]	2000	rat	Chronic alteration in immune function (lymphocyte proliferation, bactericidal activity of macrophages)
Kassa[167]	2000	rat	Persistent changes in DNA and protein metabolism in liver tissues
Kassa[166]	2001	rat	Subtle chronic signs of neurotoxicity and immunotoxicity with repeated exposures
Kassa[161]	2001	rat	Impaired spatial memory
Conn[57]	2002	rat	No persistent effects on reported indices of temperature regulation and motor activity
Henderson[113]	2002	rat	Delayed, persistent changes in cholinergic receptors in brain areas associated with memory loss and cognitive changes
Hulet[126]	2002	guinea pig	Persistent failure to habituate on functional test battery
Scremin[263]	2002	rat	Persistent increase in cerebral blood flow in specific areas
Kalra[151]	2002	rat	Suppression of immune response (antibody-forming cells and T cell responses) mediated by the autonomic nervous system
Roberson[254]	2002	guinea pig	Chronic depression of AChE activity, persistent behavioral changes (disordered activity, increased rearing behavior)
Husain[127]	2003	mouse	Persistent reductions in respiratory exchange, blood AChE activity and BChE activity, NTE activity in various tissues
Scremin[262]	2003	rat	Down-regulation of muscarinic receptors in hippocampus, decreased habituation
Kassa[162-164]	2003 2004 2004	mouse	Chronic alteration in immune function (increase in CD19 cells, decrease in CD4 cells, decrease in mitogen-induced lymphoproliferation, increased NK cell activity)

Table 9. Animal Studies Evaluating Synergistic Effects of Gulf War-Related Exposures

Study	Year	Animal Model	Exposures Studied	Major Finding(s)
Abou-Donia[9]	1996	hen	PB, DEET, permethrin	Neurotoxicity greater when 2 exposures combined, further enhanced when all 3 exposures combined
Abou-Donia[8]	1996	hen	PB, DEET, chlorpyrifos	Combined exposures enhanced inhibition of brain AChE, BChE, and NTE, neurologic dysfunction, and neuropathologic lesions
Baynes[26]	1997	rodent, pig skin	DEET, permethrin, carbaryl	DEET does not enhance dermal absorbtion of permethrin or carbaryl
Buchholz[41]	1997	rat	PB, permethrin	PB ingestion resulted in lower central nervous system levels of permethrin
Chaney[49]	1997	mouse	PB, adrenergic drugs, caffeine	Lethality of PB enhanced by adrenergic drugs and caffeine
McCain[200]	1997	rat	PB, permethrin, DEET	Significantly greater lethality from combinations of exposures than single exposures
Chaney[50]	2000	rat	DEET, PB	DEET + PB significantly inhibited brain AChE activity, but not peripheral AChE activity
Van Haaren[350]	2000	rat	PB, permethrin	Serum permethrin levels were increased by co-exposure to PB, but the combination did not affect behavioral responses
Hoy[126,127]	2000 2000	rat	PB, DEET, permethrin	Permethrin in combination with either PB or DEET affected locomotion rates in male, but not female rats
Abou-Donia[6]	2001	rat	PB, DEET, permethrin	Combined exposures at physiologically relevant doses led to neurological and behavioral deficits, and alterations in brain AChE receptors
Abou-Donia[5]	2001	rat	DEET, permethrin	Combined dermal exposures decreased blood brain barrier permeability in cerebral cortex and produced impaired sensorimotor performance
Abu-Qare[10]	2001	rat	Sarin, PB	Combined exposures led to increases in urine levels of markers of oxidative stress
Abu-Qare[11]	2001	rat	DEET, permethrin	Single dermal dose of combined exposures produces significant increase in mitochondrial release of cytochrome c
Abu-Qare[12]	2001	rat	PB, DEET, permethrin	Oral PB combined with dermal application of DEET resulted in maximum urine levels of markers of oxidative stress
Peden-Adams[233]	2001	mouse	DEET, PB, JP-8 jet fuel	Exposure combination altered selected immunological endpoints, including delayed hypersensitivity and suppression of IgM response, but did not affect other immune measures
Van Haaren[351]	2001	rat	PB, permethrin, DEET	Small doses of chemicals disrupt behavioral responses, with synergistic effects observed in some measures

Table 9. (cont.) Animal Studies Evaluating Synergistic Effects of Gulf War-Related Exposures

Study	Year	Animal Model	Exposures Studied	Major Finding(s)
Abdel-Rahman[3]	2002	rat	Restraint stress, low-dose PB, DEET, permethrin	Combined exposures disrupted blood brain barrier in some brain areas, and led to increased neuronal death
Baynes[27]	2002	pig skin	PB, permethrin	PB significantly enhanced dermal absorption and distribution of permethrin
Riviere[253]	2002	pig skin	Permethrin, sulfur mustard, JP-8 jet fuel, DEET	Permethrin absorption and penetration increased by presence of JP-8 fuel, decreased by presence of sulfur mustard
Vogel[353]	2002	mice	DFP, PB, permethrin, parathion	PB reduced DFP binding; permethrin and parathion increased DFP binding in the brain
Abou-Donia[7]	2003	rat	Stress, PB, DEET, permethrin	Combined exposure to physiologically relevant doses of chemicals caused destruction of testicular germ cells; effect enhanced by stress
Husain[127]	2003	mouse	Sarin, PB, exercise	Exercise augmented synergistic effects of chemical exposures on AChE activity and NTE activity in various tissues
Riviere[252]	2003	pig skin	DEET, PB, DFP, permethrin, sulfur mustard	DEET absorption enhanced by PB, mustard, and DFP
Scremin[262]	2003	rat	PB, sarin	PB reduced delayed neurological and behavioral effects of sarin, but did not reverse delayed effects on brain muscarinic receptors
Abdel-Rahman[2]	2004	rat	Malathion, DEET, permethrin	Combination of pesticides induced neurobehavioral deficits and neuron degeneration, with no overt signs of neurotoxicity
Abdel-Rahman[1]	2004	rat	Stress, PB, DEET, permethrin	Combined exposures produced damage to areas of the brain associated with motor and sensory function, learning and memory, and coordination
Abou-Donia[4]	2004	rat	PB, DEET, permethrin	Combined exposures produced sensorimotor deficits and altered brain AChE activity levels
Olgun[229]	2004	mouse	Lindane, malathion, permethrin	Exposure of thymus cells to combinations of chemicals resulted in significantly higher levels of apoptosis and necrosis

biological systems and animal models that result from different combinations of Gulf War-related exposures. For example, combinations of DEET, PB, and permethrin have been shown to synergistically increase indicators of neurotoxicity, including changes in brain AChE levels and behavioral changes. Other studies have indicated that absorption of some topically-applied pesticides, such as DEET and permethrin, is increased by concurrent exposure to PB or JP-8 jet fuel. In addition, studies have demonstrated changes in immunological function that result from exposure

In 1994 an international study group coordinated by the Centers for Disease Control and Prevention (CDC) established the most widely accepted criteria for CFS. The CDC Guidelines for the Evaluation and Study of CFS are as follows: A thorough medical history, physical examination, mental status examination, and laboratory tests (diagram) must be conducted to identify underlying or contributing conditions that require treatment. Diagnosis or classification cannot be made without such an evaluation. Clinically evaluated, unexplained chronic fatigue cases can be classified as chronic fatigue syndrome if the patient meets both the following criteria:

1. Clinically (i.e., by a doctor) evaluated, unexplained persistent or relapsing chronic fatigue that is of new or definite onset (i.e., not lifelong), is not the result of ongoing exertion, is not substantially alleviated by rest, and results in substantial reduction in previous levels of occupational, educational, social, or personal activities.

2. The concurrent occurrence of four or more of the following symptoms: substantial impairment in short-term memory or concentration; sore throat; tender lymph nodes; muscle pain; multi-joint pain without swelling or redness; headaches of a new type, pattern, or severity; unrefreshing sleep; and post-exertional malaise (general discomfort or unease) lasting more than 24 hours. These symptoms must have persisted or recurred during 6 or more consecutive months of illness and must not have predated the fatigue.

CFS has been around for centuries under a variety of names, including febricula, nervous exhaustion, neurasthenia, epidemic neuromyasthenia, benign myalgia encephalomyelitis, Royal Free disease, and chronic mononucleosis. So far, no clear cause has been established. Current evidence suggests there may be multiple causes.

Fibromyalgia (FM) is a term for a chronic disorder characterized by widespread musculoskeletal pain, fatigue, and multiple tender points. "Tender points" refers to tenderness that occurs in precise, localized areas, particularly in the neck, spine, shoulders, and hips. People with this syndrome may also experience sleep disturbances, morning stiffness, irritable bowel syndrome, anxiety, and other symptoms.

In 1990, a committee of the American College of Rheumatology (ACR) established the most widely accepted criteria for FM. The two criteria are a history of widespread pain and pain in 11 of 18 defined tender point sites when the doctor presses hard with a finger.

1. History of widespread pain.

Definition. Pain is considered widespread when all of the following are present: pain in the left side of the body, pain in the right side of the body, pain above the waist, and pain below the waist. In addition, axial skeletal pain (cervical spine or anterior chest or thoracic spine or low back) must be present. In this definition, shoulder and buttock pain is considered as pain for each involved side. "Low back" pain is considered lower segment pain.

2. Pain in 11 of 18 tender point sites on digital palpation (that is, pressing hard with the finger)

Digital palpation should be performed with an approximate force of 4 kg.

For a tender point to be considered "positive" the subject must state that the palpation was painful. "Tender" is not to be considered "painful."

Like CFS, fibromyalgia has been described for hundreds of years under a variety of names. Names used include muscular rheumatism, fibrositis, fibromyositis, and psychogenic rheumatism. No clear cause has been established for this condition.

Some common problems for individuals with FM include fatigue, headaches, hearing and vision problems, memory and concentration difficulties, "allergic" and chemical/photo sensitivity symptoms, non-cardiac chest pain, irritable bowel syndrome, chronic sinusitis, heartburn, and irritable bladder.

VA Asks IOM to Update Review of Long-Term Health Effects of Nerve Gas Sarin

New evidence on the health effects of sarin has prompted Secretary Principi to ask the National Academy of Sciences Institute of Medicine to reconsider the long-term health effects of this gas.

"Recently, a number of new studies have been published on the effects of sarin on laboratory animals," wrote Secretary Principi in a January 24, 2003, letter to Harvey Fineberg, M.D., Ph.D, President, Institute of Medicine. "These studies have raised concerns with Gulf War veterans and other Americans regarding the relationship of these studies to possible health consequences of human exposure."

With this in mind, Secretary Principi requested the IOM to examine the medical and scientific literature on the health effects of sarin published since its 2000 report. Secretary Principi asked that the IOM report back to VA "as soon as possible" on whether this new research affects earlier IOM conclusions regarding the "possible long-term health consequences of exposure to low levels of sarin."

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OP insecticide data in its conclusion, the committee reviewed the OP epidemiology literature. The committee responsible for *GW2* (IOM, 2003a) reviewed the literature on OP compounds. The present committee reviewed relevant epidemiology studies published since the preparation of that report.

Animal studies had a small role in the committee's assessment of association between putative agents and health outcomes. As with previous committees, this committee used animal data for making assessments of biologic plausibility in support of the epidemiologic data rather than as part of the weight of evidence to determine the likelihood that an exposure to a specific agent might cause a long-term outcome.

The committee classified the evidence of an association between exposure to sarin and cyclosarin and a specific health outcome into five categories (Box 1-1). The categories closely resemble those used by previous committees that evaluated the effects of chemicals related to the Gulf War (IOM, 2000a, 2003a) and those used by several IOM committees that have evaluated vaccine safety (IOM, 1991, 1994a), herbicides used in Vietnam (IOM, 1994b, 1996, 1999, 2001, 2003b), and indoor pollutants related to asthma (IOM, 2000b). The committee's conclusions, presented in Chapter 4, represent its collective judgment.

The committee endeavored to express its judgment as clearly and precisely as the available data allowed, and it used the established categories of association from previous IOM studies because they have gained wide acceptance over more

BOX 1-1
Categories of Evidence

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Project Title: Review of the Medical Literature Relative to Gulf War Veterans' Health

Project Identification Number: HPDP-H-04-04-A

Responsible Staff Officer: Peter James

Major Unit:
Institute of Medicine

Sub Unit:
Board on Health Promotion and Disease Prevention

Project Scope:
An IOM committee will review, evaluate, and summarize the peer-reviewed medical literature to determine what this information taken together can tell us about the health status of Gulf War veterans. In particular, this review will help inform the Department of Veterans Affairs of deployment-related illnesses among Gulf War veterans that might not be fully appreciated.

The committee will summarize what this literature collectively tells us about the nature and prevalence of veterans' symptoms and illnesses, including: unexplained illnesses, diagnosable illnesses, neurological illnesses, reproductive health effects, cancer, disability, mortality, and hospitalizations. The committee might recommend approaches for studies that will provide answers about the health of current Gulf War veterans, as well as for those involved in future deployments.

Sponsor: Department of Veterans Affairs

Starting date: The approximate start date for the project is 09/01/2004.

A Final Report will be issued at the end of the project in approximately 15 months.

Project Duration: 15 months

Environmental Exposure Report

Pesticides

Final Report

April 17, 2003

Many veterans of the Gulf War have expressed concern that their unexplained illnesses may have resulted from their experiences in that war. In response to veterans' concerns, the Department of Defense established a task force in June 1995 to investigate those incidents and circumstances relating to possible causes. The Special Assistant to the Deputy Secretary of Defense for Gulf War Illnesses took over responsibility for these investigations on November 12, 1996. Effective April 5, 2001, the Special Assistant to the Under Secretary of Defense (Personnel and Readiness) for Gulf War Illnesses, Medical Readiness, and Military Deployments assumed continued responsibility for Gulf War issues.

Environmental Exposure Reports are reports of what the Department of Defense knows today about certain events that took place during Operations Desert Shield and Desert Storm of 1990 and 1991. This environmental exposure report focuses on the use of pesticides by US military personnel and the resulting exposures to these compounds. The Department published the initial report on January 12, 2001. This is a final report because no new information has been received to change the findings and assessments of the previous report. As always, if you believe you have information that may change this environmental exposure report, please call:

1-800-497-6261

William Winkenwerder Jr., MD
Assistant Secretary of Defense (Health Affairs)
Special Assistant to the Under Secretary of Defense (Personnel and Readiness)
for Gulf War Illnesses, Medical Readiness, and Military Deployments
US Department of Defense
2001212-0000036 Ver. 2.0

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I. INTRODUCTION

II. SUMMARY
- A. Why We Investigated Pesticides
- B. Exposures
- C. Investigation

Preventive medicine personnel who apply certain pesticide sprays and fogs are required to use the appropriate personal protective equipment, which may include boots, gloves, coveralls, goggles and respirators. The required protection depends on the pesticide applied. During the Gulf War, the use of personal protective equipment by applicators varied depending on several factors, including availability, serviceability, and whether the applicator followed the guidance. In some cases, applicators did not use appropriate personal protective equipment.

C. Investigation

The Deployment Health Support Directorate could locate no sampling data and no information about pesticide application rates generated during the Gulf War. However, we conducted over 900 interviews with veterans we believed might have information about pesticide use during the Gulf War, including preventive medicine personnel. Of these interviews, 322 provided specific information related to pesticide exposure.

This report also relies on information from the RAND literature review and RAND Gulf War veteran survey, as described in Sections IV.E.3 and IV.E.4, respectively. The survey describes pesticide use by the average servicemember during the Gulf War, and provides the best available information on which pesticides the general military population may have used for personal use, or applied in or around their living or working environment.

As part of this investigation, we performed a health risk assessment of pesticide use by land-based servicemembers deployed to the Gulf. The health risk assessment identifies groups who, because of their occupational specialty, may have been at greater risk for adverse health effects arising from exposures to pesticides. Most veterans were exposed to pesticides, but at levels insufficient to cause even minor health problems. Investigators uncovered no evidence that the majority of veterans were exposed to unhealthful levels of pesticides.

The results of this analysis benefit our understanding of the issues related to the military's use of pesticides. A number of the findings and conclusions reached in this report will benefit pesticide handling and management activities in future deployments, as well as provide DoD with areas for additional research in order to better define health risks under conditions that previously may not have been suspect.

D. Conclusions

During the Gulf War:

- **The military did a very good job protecting servicemembers from infection by pest-borne diseases.** There was a low incidence of pest-borne diseases (only 40 documented cases) among servicemembers due in part to the effective pest management programs implemented by the military.
- **It is likely that at least 41,000 servicemembers may have been overexposed to pesticides.** Information from a scientifically peer-reviewed retrospective health risk assessment (HRA) and from RAND indicate that these servicemembers may have been overexposed to various combinations of pest strips, sprayed pesticides, and fly baits. Approximately 30,500 members of the general military population may have been at elevated risk for short-term health effects because of exposure to pest strips. Another group of about 7,000 of the general military population may have been overexposed to pesticides applied during spraying operations. Approximately 3,500 to 4,500 pesticide applicators were probably one of the more highly

pesticide-exposed groups.

- **Overexposures to pesticides, particularly organophosphates and carbamates, may have contributed to the unexplained illnesses reported by some Gulf War veterans.** The HRA and the RAND survey indicate that some servicemembers may have been overexposed to pesticides. In studies of non-veterans, overexposures to organophosphates and carbamate pesticides, which produced acute symptoms at the time of exposure, have been associated with late or chronic symptoms similar to some of those reported by some Gulf War veterans. Some epidemiologic studies of Gulf War veterans have found associations between self-reports of pesticide exposure and self-reported symptoms.

Further research is needed in the following areas:

- **Effects of low-level pesticide exposures.** Because most pesticide exposures were low level and did not produce signs and symptoms near the time of exposure, it is important to know whether these types of exposures might produce long-term health effects.
- **Pesticide interactions with other chemicals.** The HRA does not account completely for some potentially important combined exposures. While it considered combinations of organophosphate and carbamate pesticides, it does not account for additional concurrent exposures to DEET, permethrin, pyridostigmine bromide, or low levels of nerve agents. Some personnel may have been exposed to varying combinations of these chemicals.
- **Epidemiologic studies focused on Gulf War or other military pesticide applicators.** Investigators were unable to locate a single epidemiologic study of military pesticide applicators. Such a study could be highly useful in helping to better characterize the link, if any, between pesticide exposures during the Gulf War, and chronic health effects.

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DEPARTMENT OF VETERANS AFFAIRS
Veterans Health Administration
Washington DC 20420

IL 10-2005-020
In Reply Refer To: 131

September 15, 2005

UNDER SECRETARY FOR HEALTH'S INFORMATION LETTER

NEW STUDY REPORTING INCREASED RISK OF BRAIN CANCER DEATHS AMONG 1991 GULF WAR VETERANS POSSIBLY EXPOSED TO SARIN CHEMICAL WARFARE AGENT AT KHAMISIYAH, IRAQ

1. Purpose. This Under Secretary for Health's Information Letter provides information to clinicians who:

a. Examine and provide care to veterans who may have been exposed to low levels of chemical warfare nerve agents including sarin during March 1991 weapons demolitions at Khamisiyah, Iraq, and

b. May have concerns about how such exposures may have affected the veteran's health.

2. Background

a. A recent scientific study ("Mortality in US Army Gulf War Veterans Exposed to 1991 Khamisiyah Chemical Munitions Destruction." TA Bullman, CM Mahan, HK Kang, WF Page. *American Journal of Public Health*, August 2005, 95(8), 1382-1388) reports an increased risk for brain cancer among United States (U.S.) Army 1991 Gulf War veterans identified as possibly exposed to low-levels of chemical warfare nerve agents during March 1991 weapons demolitions at Khamisiyah, Iraq, based upon exposure modeling sponsored by the Department of Defense (DOD).

b. DOD has informed the Department of Veterans Affairs (VA) that they intend to mail letters in September 2005 to the more than 100,000 Gulf War (Operation Desert Shield and Desert Storm) veterans estimated, through the DOD exposure modeling, to have been exposed to low levels of sarin at Khamisiyah. The letters will inform them of these new results and suggest that concerned veterans can contact their local VA medical center for more information.

c. Concerns about possible health problems from low-level sarin exposure became an issue for 1991 Gulf War veterans following revelations that some Iraqi munitions destroyed by U.S. forces at Khamisiyah contained this agent. In 1997 and 2000, DOD sponsored modeling of potential chemical warfare agent exposure for Gulf War veterans resulting from U.S. demolition of Iraqi chemical weapons at Khamisiyah in March 1991. They concluded that no Gulf War veteran experienced acute exposure; however, about 100,000 veterans could have been exposed to "very low levels" (sub-clinical sarin exposures so small that they would have caused no

immediate or obvious poisoning). This is consistent with DOD's observation that throughout this period there were no reports of chemical warfare agent detections, or of any service members experiencing symptoms consistent with acute chemical warfare agent exposure.

d. The new publication compares causes of death among 100,487 sarin-exposed (based on DOD's model) to 224,980 non-exposed Army Gulf War veterans. Researchers reported no difference in overall death rates or overall death rates from cancer between the exposed and non-exposed Gulf War veterans. However, exposed veterans were about twice as likely to have died from brain cancer compared to unexposed veterans, or about 12 excess brain cancer deaths among the 100,487 exposed veterans over a 9-year period.

e. Consistent with earlier studies, overall mortality and mortality for any specific cancer including brain cancer among these veterans was about half that of the comparable civilian U.S. population. This is almost certainly because people joining the military tend to be significantly healthier than average. NOTE: A current congressionally mandated literature review by the National Academy of Sciences Institute of Medicine (IOM) will include evaluation of the new report.

f. There are several significant problems with the new study that limit its interpretation:

(1) The DOD Khamisiyah exposure modeling has been soundly criticized as unreliable by both the U.S. Congressional Government Accountability Office and by IOM. In their 2004 Update on sarin health effects, IOM concluded "Because of the uncertainty in the [Khamisiyah] exposure assessment models . . . studies [based on that model] do not provide strong evidence for or against the presence of neurologic effects."

(2) The study's authors themselves point out that since sarin is not a known carcinogen, it may be that the demolitions at Khamisiyah released other hazardous agents that could have caused the apparent increased risk of brain cancer death. Sarin specifically and organophosphorus nerve agents in general, including commonly used pesticides, are not considered to be carcinogens.

(3) The use of multiple statistical comparisons used in this study could easily have lead to a spurious statistically-significant association. Apparently, more than sixty comparisons were made to identify one statistically-significant association between model-based exposure and brain cancer. The authors themselves concluded that additional research is needed to confirm findings of a higher brain cancer death risk for some Gulf War veterans.

(4) A 2000 congressionally-mandated review and a 2004 update conducted by the IOM concluded, based upon their review of a large body of scientific literature including reports using the DOD Khamisiyah modeling, that the evidence did not support any long-term health effects following sub-clinical sarin exposure. ("Gulf War & Health Vol. 1: Depleted Uranium, Pyridostigmine Bromide, Sarin, Vaccines," Institute of Medicine, National Academies Press, 2000, 408 pp, and "Gulf War & Health: Updated Literature Review of Sarin." Institute of Medicine, National Academies Press, 2004, 120pp, at www.nap.edu).

3. Guidance. The following summary is to assist VA health care staff in providing care to veterans of the 1991 Gulf War who may have been exposed to chemical warfare nerve agents including sarin during operations at Khamisiyah.

a. There are no tests available today that can confirm exposure to these agents years or decades in the past. Therefore, medical care should focus upon the current health of the veteran, e.g., taking a thorough military and medical history, along with a basic medical examination that includes appropriate laboratory tests and specialty consultations if warranted relating to the veteran's complaints and medical findings.

b. Systematic congressionally-mandated reviews of relevant literature on sarin health effects by the National Academies of Science Institute of Medicine have not identified any specific illness as connected to sub-clinical exposure to chemical warfare nerve agents including sarin.

c. Although possible exposure to low levels of sarin at Khamisiyah in 1991 probably has minimal clinical significance today, VA health care providers need to be prepared to address the concerns of veterans and their families that may result from hearing about the new study either from the media or from DOD's letter-writing campaign. In particular, even if the finding of increased brain cancer risk among Khamisiyah veterans can be confirmed, the actual risk of brain cancer among veterans of the 1991 Gulf War is very small. Additional general information about the risks from exposure to sarin and other hazardous agents associated with the 1991 Gulf War is available at www.va.gov/EnvironAgents, and in the VA Veterans Health Initiative Independent Study Guide "Health Effects from Chemical, Biological, and Radiological Weapons," available at www.va.gov/VHI.

d. Veterans need to be informed that seeking care for conditions possibly related to exposure to chemical warfare agents does not constitute a claim for compensation. ***NOTE: Veterans wishing to file a compensation claim need to be referred to a Veterans Benefits Counselor, or be advised to contact the appropriate VA Regional Office at 1-800-827-1000.***

4. Inquiries. Questions regarding this information letter may be addressed to the Director, Environmental Agents Service (131), at (202) 273-8579.

S/ Jonathan B. Perlin, MD, PhD, MSHA, FACP
Under Secretary for Health

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identified.

COMPLEXITIES IN ADDRESSING GULF WAR HEALTH ISSUES

Investigations of the health effects of past wars often focused on narrowly defined hazards or health outcomes, such as infectious diseases (for example, typhoid and malaria) during the Civil War, specific chemical hazards (for example, mustard gas and Agent Orange) in World War I and Vietnam, and combat injuries. Discussion of the possible health effects of the Gulf War, however, involves many complex issues, such as exposure to multiple agents, lack of exposure information, nonspecific illnesses that lack defined diagnoses or treatment protocols, and the experience of war itself. The committee was not charged with addressing those issues, but it presents them here to acknowledge the difficulties faced by veterans and their families, researchers, policy-makers, and others in trying to understand Gulf War veterans' health.

Multiple Exposures and Chemical Interactions

Military personnel were potentially exposed to numerous agents during the Gulf War. The number of agents and the combination of agents to which the veterans may have been exposed make it difficult to determine whether any one agent or combination of agents is the cause of the veterans' illnesses. These include preventive measures (such as use of pyridostigmine bromide, vaccines, and insecticides), hazards of the natural environment

Related Books:

Gulf War and Health: Volume 1. Depleted Uranium, Pyridostigmine Bromide, Sarin, and Vaccines (2000)

Veterans and Agent Orange: Update 2002 (2003)

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Mr. SHAYS. Nineteen years, and that is one of the more powerful statements I have ever had any witness deliver.

[Applause.]

Mr. SHAYS. Excuse me. This is a hearing and, I am sorry, applause is not allowed.

Dr. Henderson.

STATEMENT OF ROGENE HENDERSON

Dr. HENDERSON. Thank you, Mr. Chairman, for this opportunity to testify before the subcommittee. I am Dr. Rogene Henderson, a senior scientist emeritus at the Lovelace Respiratory Research Institute, an independent, not-for-profit research organization in Albuquerque, NM. I am a National Associate of the National Academies of Science.

I am testifying today concerning the value of animal research in improving our ability to assess associations between exposure and health outcome in humans. In particular, for this hearing I am addressing the value of animal research in determining associations between exposures to noxious agents and health effects in Gulf war veterans.

Because we are concerned about health problems in humans, one might question the need for animal research. Why not treat the conditions in humans symptomatically, as best we can? The answer is that in some situations, as with veterans returning from war, the symptoms may be diverse and difficult to diagnose.

Animal research allows us to determine the mechanism by which the health problems occur. And this is done through conduct of controlled experiments that cannot be done in humans.

If one knows the factors contributing to the development of the condition, one can then start to work on therapy or intervention techniques; and hopefully, prevent the same problems from occurring in the future.

It is fair to ask whether animal responses correctly predict what would happen in humans. Animals have numerous anatomical, cellular, physiological, and biochemical similarities with humans. And we know a great deal about how to make allowances for known differences. Virtually every medical breakthrough in the past century has come about as the result of research with animals. These include vaccines for Polio, the use of Insulin to treat Diabetes, kidney dialysis, and cardiac bypass surgery, just to name a few.

Animal studies are now being used to assess possible associations between symptoms of Gulf war veterans and exposures to noxious agents. For example, the effects of exposure to low levels of nerve gas agents that do not cause obvious neurological symptoms have been studied. We all know what high levels of a nerve gas will do. That kills us. But only recently have studies been completed to determine what low levels will do.

In our laboratory, we found that low level, sub-clinical exposures of rats to the nerve gas Sarin suppresses the immune system and, in the presence of high temperatures, results in alterations in areas of the brain that are involved in cognitive function. Moreover, these sub-clinical doses of Sarin also affect the neuroendocrine function, and dramatically decrease serum cortisol levels. We are currently

testing various therapeutic interventions for the treatment of these effects.

Work by Dr. Abou-Donia, at Duke University, has shown that the combined treatment of rats with Sarin and the chemical used as a counter measure to Sarin, Pyridostigmine, causes death of neural cells. The rats recover, but suffer persistent memory and cognitive deficits. These symptoms are similar to those that were reported by some veterans returning from the Gulf war, and also in some survivors of the Japanese subway terrorist attacks.

This line of animal research, which would be impossible to conduct in humans, is essential to provide information about potential health effects and approaches to treatment in veterans exposed under similar conditions.

Animal studies are also being used to evaluate the risks to veterans from embedded depleted uranium. These studies include investigations to determine if the fragments can cause general toxicity, or induce cancer, or can partially dissolve and move to the brain or kidney and cause damage.

This type of information has been used to guide the medical management of wounded Gulf war veterans. In any study on human health, information gained from human experience is the most useful. But when particularly puzzling health problems occur, animal studies are an excellent tool to help determine potential causes, effective therapeutic measures, and potential preventative measures.

In the case of the Gulf war veterans, human information has been considered. The human data have not been adequate to fully explain the symptoms in the veterans, and animal research has been conducted that provides clues to clarify the situation.

We are making good progress in determining the potential exposures that may be associated with the symptoms of the veterans. In determining these possible associations, we must consider the weight of evidence from all available sources of information, including human epidemiology studies, short-term clinical studies, and animal studies. It would be irresponsible to do otherwise. Thank you.

[The prepared statement of Dr. Henderson follows:]

Written Testimony Presented to the
Committee on Government Reform
Subcommittee on National Security, Emerging Threats, and International Relations

at a hearing entitled
Examining VA Implementation of the Persian Gulf War Veterans Act of 1998

Witness: Dr. Rogene F. Henderson, PhD. DABT
Senior Scientist Emeritus
Lovelace Respiratory Research Institute
2425 Ridgecrest Drive SE
Albuquerque NM 87105

November 15, 2005

I am Dr. Rogene Henderson, a Senior Scientist Emeritus at the Lovelace Respiratory Research Institute, an independent, not-for-profit research organization in Albuquerque, NM. I am a National Associate of the National Academies of Science.

I am testifying today concerning the value of animal research in improving our ability to assess association between exposure and health outcome in humans. In particular for this hearing, I am addressing the value of animal research in determining associations between exposures and health effects in Gulf War veterans..

Because we are concerned about health problems in humans, one might question why we need animal research. Why not treat the condition in humans symptomatically as best we can? The answer is that in some situations, as with veterans returning from war duty, the symptoms may be diverse and difficult to diagnose. Animal research allows us to determine the mechanisms by which the health problem might occur through conduct of controlled experiments that cannot be done in humans. If one knows the factors contributing to the development of the condition, one can then start to work on therapy or intervention techniques, and of equal importance for veterans, one may be able to prevent the problems from occurring in the future.

It is fair to ask whether animal responses correctly predict what would happen in humans. Animals have numerous anatomical, cellular, physiological and biochemical similarities with humans and we know a great deal about how to make allowances for known differences. There are striking similarities between the physiological systems of humans and various species of animals. Much of what we know about the immune system has come from studies with mice, and much of what we know about the cardiovascular system has come from studies with dogs. Virtually every medical breakthrough in the past century has come about as the result of research with animals. These include vaccines for polio, the use of insulin to treat diabetes, high blood pressure medicines, cataract surgery, hip replacement, kidney dialysis and cardiac bypass surgery to name a few.

Animal studies are now being used to assess possible associations between symptoms of Gulf War veterans and exposures to noxious agents. For example, the effects of exposure to low levels of nerve gas agents that do not cause obvious neurological symptoms are being studied. We all know what high levels of a nerve gas will do, but only recently have studies been completed to determine what low levels will do. In our laboratory we found that such low level exposures suppress the immune system (Kalra et al., 2002) and in the presence of high temperatures, results in alterations in areas of the brain that are involved in cognitive responses (Henderson et al., 2002) Moreover, the subclinical doses of sarin also affect neuroendocrine function and dramatically reduce serum cortisol levels.. In humans, lower serum cortisol levels are associated with symptoms seen in post-traumatic stress disorder, a condition found in many veterans. We are currently testing various therapeutic interventions for the neuroimmune effects of sarin exposure. Another set of experiments indicated that such combined exposures did not affect the thermoregulatory fu[redacted]

Work by Dr.Abou-Donia at Duke University has also shown that the combined treatment of rats with sarin and the chemical used as a counter measure to sarin (pyridostigmine) causes neural cell death (Abu-Qare and Abou-Donia, 2002). The rats recover but suffer lingering memory and cognitive deficits. These symptoms are similar to those reported by some veterans returning from the Gulf War and also in some survivors of the Japanese subway terrorist attacks. This line of animal research, which would be impossible to conduct in humans, is essential to provide information about potential health effects and approaches to treatment in veterans exposed under similar conditions. It would be a mistake to fail to conduct such research or to ignore its results.

Animal studies are also being used to evaluate the risks to veterans from depleted uranium fragments embedded in soft tissues or from inhaled dusts containing depleted uranium. These studies have shown that depleted uranium will concentrate in the kidneys and can cause kidney damage in rats after inhalation of high concentrations of depleted uranium dusts. DU may also concentrate in the brain but the effects of the low concentrations noted are still being studied. Embedded DU fragments of sufficient size have been found to cause local cancers in the muscles of rats. The results of these studies have been used to guide the medical management of wounded Gulf War veterans.

In any study on human health, information gained from human experience is the most useful. But when particularly puzzling health problems occur, animal studies are an excellent tool to help determine potential causes, effective therapeutic measures and potential preventative measures. In the case of the Gulf War veterans, human information has been considered, the human data have not been adequate to fully explain the symptoms in the veterans, and animal research has been conducted that provides clues to help clarify the situation. We are making good progress in determining the potential exposures that may be associated with the symptoms of the veterans. In determining these possible associations, we must consider the weight of evidence from all available sources of information, including human epidemiology studies, short-term clinical studies and animal studies. It would be irresponsible to do otherwise.

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Mr. SHAYS. Thank you very much, Dr. Henderson.

Dr. O'Callaghan. Let me ask you, you work for the CDC, correct?

Dr. O'CALLAGHAN. I do. I work for the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

Mr. SHAYS. And does your statement have to go through a process of approval before you submit it?

Dr. O'CALLAGHAN. Yes, it does.

Mr. SHAYS. Thank you. Dr. O'Callaghan.

STATEMENT OF JAMES P. O'CALLAGHAN

Dr. O'CALLAGHAN. Mr. Chairman and members of the subcommittee, my name is James O'Callaghan. I head the Molecular Neurotoxicology Laboratory at the National Institute for Occupational Safety and Health, and I was recently appointed to serve on the Department of Veterans Affairs Research Advisory Committee on Gulf War Veterans' Illnesses. I am pleased to be here in my capacity as a member of the Advisory Committee to discuss the use of data from animal studies to diagnose and treat human brain disorders.

Over the past 25 years, I have focused my research on detecting and characterizing the adverse effects of chemicals and drugs on the nervous system—research that includes the use of experimental animals to model human brain damage.

In biomedical research, investigations using animal models are useful for understanding disease processes and for the development of relevant therapies for brain disorders that afflict humans. The use of animal models is useful in the neurosciences because, short of obtaining post-mortem brain samples at autopsy, there is no other way to discover and understand the basis of brain disorders.

Moreover, while one might expect that brain disorders and brain damage may easily be detected in living humans using psychiatric and neurological examinations or even state-of-the-art imaging, such is generally not the case.

Think for a moment of the two devastating diseases of the human nervous system: Alzheimer's Disease and Parkinson's Disease. We can diagnose these distinct brain disorders in the living human, but these are progressive neurological diseases that result from underlying brain damage that starts decades earlier.

It is estimated that it takes the loss of 70 to 80 percent of the neurons affected in Parkinson's Disease before the onset of clinical symptoms can be detected. This means that one is suffering from the disease long before symptoms are evident. Thus, as neuroscientists, we are faced with the problem of having evidence of end-stage disease, without knowing the cause or even milestones of disease progression.

This is where animal models are so useful. For example, genetically engineered mice and mice treated with selective neurotoxins now make it possible to replicate features of diseases such as Parkinson's and Alzheimer's in a controlled laboratory setting.

These advances raise hope for a better understanding of the molecular basis of these debilitating diseases, and for the eventual introduction of therapies before symptoms become manifest and before the disease process has advanced.

Such research and interventions are especially useful to NIOSH's work to enhance worker safety and health, since excess neurodegenerative disease, including Parkinson's and Alzheimer's, has been associated with a variety of occupations and workplace exposures.

Although animal studies can be quite useful, they do have limitations. The major weakness of such studies is that biological differences between humans and animals may result in different responses to neurotoxins or medical interventions. So it is important to bear in mind that animal data are not always predictive of human responses.

When available, scientifically sound epidemiological data—data that are based on the study of the distribution and determinants of disease in human populations—are superior to animal data. However, in cases where information about human exposure is lacking, research in a controlled experimental setting, generally using animals, can provide useful scientific information.

Animal models not only hold promise for leading to cures for neurological diseases; they form the cornerstone for safety assessments, and have proven to have predictive validity for setting margins of safety for potential adverse effects of drugs, including adverse effects on the nervous system.

Animal data have been used to help establish the margins of safety to protect humans from drug-induced toxicity, to set pesticide exposure limits, and to determine if specific agents or mixtures have the potential for adverse long-term outcomes.

As the relationship between chronic, low-level exposures and adverse neurological outcomes has become better understood, the Department of Veterans Affairs and the U.S. Army have established animal research programs to further our understanding of the relationship between chemical exposures and neurodegenerative diseases.

The long-term goals of these programs are to relate short- and long-term exposures to specific chemical agents and mixtures to the development of brain disorders, and to develop specific neuroprotective agents and strategies to protect against the development of nervous system disorders.

In summary, animal studies have been, and will continue to be, of great importance in establishing a predictive relationship between specific exposures in humans and subsequent adverse effects on the nervous system.

Again, thank you for the opportunity to testify before you today. I will be happy to answer any questions.

[The prepared statement of Dr. O'Callaghan follows:]

Testimony
Before the Committee on Government Reform
Subcommittee on National Security, Emerging Threats, and International Relations
United States House of Representatives

Examining VA Implementation of the Persian Gulf War Veterans Act of 1998

Statement of

James P. O'Callaghan, Ph.D.
Member
Department of Veterans Affairs Research Advisory Committee on Gulf War Illnesses

For Release on Delivery
Expected at 1:00 pm
Tuesday, November 15, 2005

Mr. Chairman and members of the Subcommittee, my name is James O'Callaghan. I head the Molecular Neurotoxicology Laboratory at the National Institute for Occupational Safety and Health (NIOSH), and I was recently appointed to serve on the Department of Veterans Affairs (VA) Research Advisory Committee on Gulf War Veterans' Illnesses. I am pleased to be here in my capacity as a member of the Advisory Committee to discuss the use of data from animal studies to diagnose and treat human brain disorders.

Over the past 25 years I have focused my research on detecting and characterizing the adverse effects of chemicals and drugs on the nervous system – research that includes the use of experimental animals to model human brain damage. In biomedical research, investigations using animal models are useful for understanding disease processes and for the development of relevant therapies for brain disorders that afflict humans. The use of animal models is useful in neurosciences because, short of obtaining post-mortem brain samples at autopsy, there is no other way to discover and understand the basis of brain disorders. Moreover, while one might expect that brain disorders and brain damage may be easily detected in the living human using psychiatric and neurological examinations, or even "state of the art" imaging, such is generally not the case. Think for a moment of the two devastating diseases of the human nervous system, Alzheimer's disease and Parkinson's disease. We can diagnose these distinct brain disorders in the living human, but, these are progressive neurological diseases that result from underlying brain damage that starts decades earlier. It is estimated that it takes the loss of 70-80% of the neurons affected in Parkinson's disease before the onset of clinical symptoms can be detected.

This means that one is suffering from the disease long before symptoms are evident. Thus, as neuroscientists, we are faced with the problem of having evidence of end stage disease without knowing the cause or even milestones of disease progression. This is where animal models are so useful. For example, genetically engineered mice and mice treated with selective neurotoxins now make it possible to replicate features of diseases such as Parkinson's and Alzheimer's in a controlled laboratory setting. These advances raise hope for a better understanding of the molecular basis of these debilitating diseases and for the eventual introduction of therapies before symptoms become manifest and before the disease process has advanced. Such research and interventions are especially useful to NIOSH's work to enhance worker safety and health since excess neurodegenerative disease, including Parkinson's and Alzheimer's, has been associated with a variety of occupations and workplace exposures.

Although animal studies can be quite useful, they do have limitations. The major weakness of such studies is that biological differences between humans and animals may result in different responses to neurotoxins or medical interventions. So it is important to bear in mind that animal data are not always predictive of human responses. When available, scientifically sound epidemiological data – data that are based on the study of the distribution and determinants of disease in human populations – are superior to animal data. However, in cases where information about human exposure is lacking, research in a controlled experimental setting, generally using animals, can provide useful scientific information.

Animal models not only hold promise for leading to cures for neurological diseases, they form the cornerstone for safety assessments and have proven to have predictive validity for setting margins of safety for potential adverse effects of drugs, including adverse effects on the nervous system. Animal data have been used to help establish the margins of safety to protect humans from drug-induced toxicity, to set pesticide exposure limits, and to determine if specific agents or mixtures have the potential for adverse long-term outcomes. As the relationship between chronic, low-level exposures and adverse neurological outcomes has become better understood, the Department of Veterans Affairs and the U.S. Army have established animal research programs to further our understanding of the relationship between chemical exposures and neurodegenerative diseases. The long-term goals of these programs are to relate short- and long-term exposures to specific chemical agents and mixtures to the development of brain disorders and to develop specific neuroprotective agents and strategies to protect against the development of nervous system disorders. In summary, animal studies have been, and will continue to be, of great importance in establishing a predictive relationship between specific exposures in humans and subsequent adverse effects on the nervous system.

Again, thank you for the opportunity to testify before you today. I would be happy to answer any questions you may have.

Mr. SHAYS. Thank you very much, Dr. O'Callaghan. Let me start out with you, Dr. O'Callaghan, and ask you—and I want you to listen to how I am asking the question—separating Mr. Binns' points about people being held accountable for what has happened in the VA in its ignoring, in my judgment, the law, is there anything that you disagree with Mr. Binns on in his statement?

In other words, setting aside—I would not ask you, as someone working for the Government, to suggest that people be fired and so on. I want to know, though, do you disagree with his analysis that the law has not been followed?

Dr. O'CALLAGHAN. Mr. Chairman, I doubt if I could adequately respond to any question relating to legal responsibilities. But I would agree wholeheartedly with Mr. Binns' suggestion that animal models of long-term neurological effects, as part of the law that was in place, have not particularly been adequately followed at this point in time.

But that is based on the fact that in studies that rely solely on human data and not on experimental animal data, those would not be complete studies to reveal the broad class of effects that you would see relationship to long-term, low-level exposures to agents, such as Dr. Henderson has already talked to us about today.

Mr. SHAYS. Dr. Henderson, I am going to ask you the same question.

Dr. HENDERSON. Well, I would like to say, as I said in my testimony, we are beginning to make great progress on this problem. And it would be foolish, irresponsible, I think, not to take into account the progress that is being made using animal models on the effects, particularly of some of the nerve agents such as Sarin; because we are just beginning to find out things.

Mr. SHAYS. Yes, and who funds your projects?

Dr. HENDERSON. Who funds my projects? The first study we did was from the Gulf war, DOD and the Gulf War Syndrome. And now DOD has funded our latest studies, and we are applying for NIH funding now.

Mr. SHAYS. Have you asked for any funding through the VA?

Dr. HENDERSON. No, we have talked. I didn't think they had the money to fund it, so we haven't pursued that.

Mr. SHAYS. Mr. Woods, I am going to ask you the same question.

Mr. WOODS. I would just answer it simply, that I agree 100 percent with Jim Binns that they are failing to obey the law.

Mr. SHAYS. Mr. Robinson.

Mr. ROBINSON. We spoke about this this morning, whether or not it rose to the level of actually having a special prosecutor look at whether or not the intent of the law was broken.

I am not a lawyer; neither is Mr. Woods. But we believe the law has been violated. Clearly, the intent of the law has been violated. And it has been steered down a road which has harmed individuals and created delay. So, yes, sir, we believe that it is a very serious, very serious charge.

Mr. SHAYS. OK. Dr. Henderson and Dr. O'Callaghan, addressing the point of, "Evidence is sufficient to conclude that there is a positive association; that is, a positive association has been observed between herbicides and the outcome in studies in which chances, bias, and confounding could be ruled out;" and then the Gulf war,

"Evidence is sufficient to conclude that there is a positive association; that is, a positive association has been observed between an exposure to a specific agent and a health outcome in human studies in which chance, bias, and confounding could be ruled out"—tell me the significance of those two different perspectives, Vietnam and the Gulf war. I will start with you, Dr. O'Callaghan.

Dr. O'CALLAGHAN. They should be the same, and addressing these problems with animal models and epidemiological data should be applied across both.

Mr. SHAYS. And it isn't, based on that definition?

Dr. O'CALLAGHAN. Not necessarily, no.

Mr. SHAYS. And explain why.

Dr. O'CALLAGHAN. Because one takes out "animals," and one does not.

Mr. SHAYS. Which takes out "animals?"

Dr. O'CALLAGHAN. The Gulf war.

Mr. SHAYS. Thank you. Dr. Henderson.

Dr. HENDERSON. Well, I think it is essential to make use of animal research in both instances; though the way it is written, you wouldn't take them into account in the Gulf war.

Mr. SHAYS. So let me just say it again. The way it is written, you wouldn't take it in what? Finish your sentence again, please.

Dr. HENDERSON. The way it is written, you would assume they weren't taking into account animal studies.

Mr. SHAYS. In the Gulf war?

Dr. HENDERSON. In the Gulf war, no. And I said that I don't see any point in tying one hand behind your back. Why not use the information? And it is of such great value. You need it in this case, because it is not clear from the human data.

Mr. SHAYS. Now, in my statement I made reference, and I think there was reference by some of your statements, to the fact that the FDA, in approving drugs, looks at animal studies. And in the case here, it doesn't. Does that sound to you—in other words, to affirm and to allow the drug to be used, they will look at animal studies. Is that correct, Dr. O'Callaghan?

Dr. O'CALLAGHAN. Yes.

Mr. SHAYS. Is that correct, Dr. Henderson?

Dr. HENDERSON. Yes.

Mr. SHAYS. In the case of Gulf war illnesses, it appears they do not. Explain to me, give me your best argument, both of you, as to, in spite of the fact that the law requires it—but if I take Mr. Binns' comments in every aspect except to suggest that someone be removed from office and prosecuted, if I take that out, give me the best argument why the bureaucracy would be so reluctant to look at animal studies. The best argument.

In other words, I am asking you to say what is their best argument. What is the best logical argument?

Dr. O'CALLAGHAN. Well, to play devil's advocate, the only thing you could say is that you had such solid data in hand from human exposures that would be predictive, and you would understand the basis for the disorder; which of course, we don't have that data.

Mr. SHAYS. And why don't we have that data?

Dr. O'CALLAGHAN. Because the exposures are too difficult to determine. And the multiple agents and the constellation of effects

are so difficult to assess only under human epidemiological conditions that we need animal models, to study that for a long-term basis.

Mr. SHAYS. Dr. Henderson, would you add anything to that?

Dr. HENDERSON. Well, I think you are asking me to read someone else's mind, I mean, to say what is in their——

Mr. SHAYS. No, I don't care if you read someone else's mind. I want you to tell me what the best argument could be for not using animal data. You don't have to be in anybody's mind. Give me the best reason.

I think, after you give me your answer, you will understand why I have asked the question. So give me the best reason. You are advising the VA not to use animal studies. Tell me your best scientific reason for not using them.

Dr. HENDERSON. Boy, that is troublesome. You are talking to someone who has spent their life in animal research and seen the value of it. So you are asking me to go against my——

Mr. SHAYS. But you must have heard the arguments.

Dr. HENDERSON. Well, it is money, I guess.

Mr. SHAYS. What is it?

Dr. HENDERSON. It may be that they are concerned about money.

Mr. SHAYS. I am not asking you for motives. You have requested that I not ask for motives. Give me the best argument for not doing it. It may not be a good argument, but give me the best argument.

Dr. HENDERSON. Animals are not humans, and we only care about humans.

Mr. SHAYS. OK. Mr. Binns, a little reluctant to—I want you to remove your anger—that I share—that the VA has not lived by the law, and give me the best argument on why you would not use animal studies.

Mr. BINNS. I don't think there is a good argument. But the argument that has been made, both in the reports and I saw it today in the paper, is the one that Dr. Henderson mentions: that humans are not animals, and therefore we have to limit our use of animal data.

And we don't know what the dosage levels were in the Gulf, and therefore we can only consider a conclusion as to humans if we knew the dosage level. But of course, they will never know the dosage levels, and they know that.

Mr. SHAYS. This subcommittee has held 14 hearings in the course of our work on this issue. And it is clear there are a lot of things we don't know. I mean, it is clear there are a lot of things we do know.

Most soldiers acted like I acted the first time I decided to put fertilizer on my lawn. I thought if I did it according to the directions, I would set my Scott spreader at three-and-a-half. That was what they said would produce results. I used my distorted logic and said, "Well, if this is so good, double is better." So I set it at six. I ended up with a burnt lawn.

We had witness after witness in the course of 14 hearings that, when the alarms went off, they took PB, Pyridostigmine Bromide—and it took me more than 10 years to be able to say that word—and they just took them all, all at once. You made reference, I

think, Dr. O'Callaghan—or did you, Dr. Henderson—to the mixing of PB and Sarin.

Dr. HENDERSON. Yes.

Mr. SHAYS. And what was the finding that you made?

Dr. HENDERSON. This is work of Dr. Abou-Donia, and he found that the combined exposures were more deleterious than either one alone. So both of those compounds act at the same reactive site.

Mr. SHAYS. Describe to me again the outcome.

Dr. HENDERSON. They have a death of neural cells, and there is a memory deficit that is persistent after the—and this is in rats. A memory and cognitive function deficit occurs in the rats.

Mr. SHAYS. Dr. O'Callaghan, could you add anything to that?

Dr. O'CALLAGHAN. At least when you look at short- or long-term toxic effects of compounds, often what you see in humans as well as animals is that you can get aggregate, or synergistic, toxicity when multiple agents are put together. So you need to study those types of events and those types of exposures in a very controlled setting, to get a reliable outcome that would be predictive of human data.

So what Dr. Henderson has said is that this is a double exposure that gave effects that the single ones alone may not have. So this is another reason to use the animal models, to study these effects.

Mr. SHAYS. And didn't you, Dr. Henderson, say that your immune system is impacted?

Dr. HENDERSON. Oh, very definitely. And this was a surprise to us. That is why it is so interesting. We didn't know what low levels would do. But it has a drastic suppression of the immune system.

Mr. SHAYS. Did you say "drastic?"

Dr. HENDERSON. Yes.

Mr. SHAYS. So low levels in animals had a drastic what?

Dr. HENDERSON. Effect on the immune system. And of course, this means, if this happens in humans, veterans would be more susceptible to infectious agents, etc.

Mr. SHAYS. Right.

Dr. HENDERSON. So we are still working on the mechanism by which this happens. And we are hoping to get some ideas for intervention or treatment.

Mr. SHAYS. Mr. Binns, in your dealing with the VA—and DOD as well—but in your dealing with the VA, does the VA or DOD deny that veterans are sick, but just can't determine their cause—excuse me. Do they accept the veterans are sick, but feel they can't determine the cause of the sickness? Or do they even deny the veterans are sick?

Mr. BINNS. They accept that the veterans are sick, but there is a disconnect between what they say as to the magnitude of the problem. On the one hand, they will stress studies showing that there are small numbers of veterans who are ill with various diagnosed illnesses—standard, off-the-shelf illnesses that people are used to.

On the other hand, at our last committee meeting we heard testimony from Dr. Han Kang of the VA, on his most recent study of Gulf war veterans which found that in excess of 25 percent of Gulf war veterans are ill with chronic, multi-symptom illnesses that don't fit into these neat categories.

So their own research does confirm that large numbers—a quarter or more—are ill. But they act as if it's only the diagnosed illnesses, which may be a much lower percentage.

Mr. SHAYS. Now, you talked, Dr. Henderson, about motives. And I wrestle with that issue tremendously, because there is no question—we documented it 100 different ways—that veterans are sick. I do agree the VA believes the veterans are sick. I do believe the DOD believes veterans are sick, but is even less interested than the VA in wanting to deal with this issue.

So, you know, then I get to motives. And while you can't speculate about motives, I can, and I do. And we are going to ultimately sort it out. One could be a fiscal issue. They have looked at ALS, and they said, "Yes, we are going to make a presumption there." My sense is it is because it is only 100, and it is such a devastating disease; so it made the list.

But as you start to look at some of these others, then the number expands significantly. So I think fiscal is a possibility.

I also think that in these studies there is concern about the use of uranium in the shells and in the protection on the equipment, and the view that this may be a factor. If your animal studies point that out, it has significant impact on how we think about the weapons systems and the protections that we provide our soldiers. So that is another area.

The other one is that the VA, in the course of our hearings, has very few people who work for it who deal with hazardous material in the workplace. And so I find myself being more tolerant because all the folks—there are very few people that have an expertise in this area: chemicals, the impact of chemicals on the body, and so on, in the workplace.

We found that of the thousands of people who work for the VA, they could only name us two people of the doctors, they could only name us two who had any expertise. So when veterans came in, they didn't have people who would intuitively say, "You know, we have seen this in the workplace."

So Mr. Binns, I am going to have my staff person ask questions in a second, but did you want to make a response?

Mr. BINNS. Yes. It is true that Secretary Principi authorized benefits for veterans with ALS. But in fact, that has not been service-connected as an across-the-board finding. The VA at the moment has no presumed service-connected illnesses for Gulf war illness.

Mr. SHAYS. Say that again?

Mr. BINNS. The VA has no illness which is currently service-connected automatically under a presumption.

Mr. SHAYS. So explain to me how they cover ALS.

Mr. BINNS. They covered ALS for the subjects who came through. And I do not know what has happened to people who have contracted ALS since. But it was done on a case-by-case basis.

Mr. SHAYS. Yes, Mr. Robinson.

Mr. ROBINSON. The Secretary has the authority—it is kind of like a magic wand—to pick out a particular group and say for those people, "We will take care of them. We will pay them benefits. It's a very debilitating disease." But it was not codified into law as a presumptive service connection; much like the finding for brain

cancer will most likely not be codified into law as a presumptive service connection.

And if I might add, you have been talking about motive. The clearest motive to me that there is a problem is this document right here, which educates VA clinicians. It is so full of inaccurate, old, no longer recognized scientific information.

Mr. SHAYS. And what is that document?

Mr. ROBINSON. This is called the "Veterans Health Initiative: A Guide to Gulf War Veterans' Health."

Mr. SHAYS. Is there a date on it?

Mr. ROBINSON. It was originally written in 2002, I believe, which is what is written on it. And the findings are, "Most Gulf War veterans have health problems similar to those experienced by veterans of other eras;" which is patently false, including the VA's own admission from their study which indicates that is not true.

Another section says, "Panels have been unable to identify a unique Gulf War Syndrome or find any specific war-time exposure to be a significant cause of illness amongst veterans." This is the information that the clinicians are reading, and the reason why, when Mike Woods walks into the VA in Kentucky, his doctor tells him, "I don't know why you're here. Gulf war veterans aren't sick, and you don't deserve compensation."

This is intent. Nowhere else in the military, in the DOD, or in Congress, can you put out a document like this, and not keep it current, and not be telegraphing your intent.

The VA has not kept up, or even consulted with or promoted, the information that the Research Advisory Committee was stood up to look at. It is not in this document. It is very rarely talked about. I think it screams intent. And it is something we would like to get changed.

Mr. SHAYS. Mr. Binns.

Mr. BINNS. One further comment about ALS. One of the three new studies that the VA initiated this spring with the IOM relates to ALS. There are only three studies in the literature pertaining to ALS and military service, so it is quite extraordinary to ask for an IOM committee to be stood up for the purpose of examining three studies.

Mr. SHAYS. I missed that point, I'm sorry. Hit me again with that.

Mr. BINNS. Usually, the IOM is brought into play when there is a very large body of scientific literature to review; such as in the case of exposures to pesticides or something like that. So it is a red flag to see that the VA has asked IOM to review the literature on ALS and Gulf war or other military service. And it is not something that would usually be done. It is not something which Congress mandated be done.

And the evidence is suggestive that the motives are not good; that the finding is going to be that this is something which we don't know enough about yet, and therefore we shouldn't have "service-connected."

Mr. SHAYS. I am going to ask Counsel to ask some questions, and then I am going to come back for a few more.

Mr. HALLORAN. Thank you. Mr. Woods, in your testimony, you said you underwent a VA Registry exam after your service. Were

you asked at that time, or at any time since then, about potential exposures, toxic exposures?

Mr. WOODS. No.

Mr. HALLORAN. Did you volunteer the information?

Mr. WOODS. They didn't ask.

Mr. HALLORAN. They didn't ask.

Mr. WOODS. I don't think they wanted to hear.

Mr. HALLORAN. In our testimony, you also said, though, that you did manage finally to get a claim through, based on your illnesses. Would you describe briefly that process and its outcome? What is the basis of the claim, and how did you prove it?

Mr. WOODS. In my testimony, I cited that I had been seeing a neurologist, who is also a psychologist, and he did a multitude of neurological tests. And I submitted those, as well as the VA's neurological tests that found the exact same findings as my private neurologist. And they were unable to diagnose the reason, the basis, for the signs and symptoms that they found in a neurological nature. And the claim was approved as an undiagnosed illness claim.

Mr. HALLORAN. Mr. Robinson, is that your experience, more broadly, with Gulf war veterans in the disability system?

Mr. ROBINSON. I would just like to add one thing, because I am very connected with Mike's case. It is that it should not take a congressional representative's interaction to get a VA claim approved. And the reason that his VA claim rose from where it was to importance in the VA is because Congressman Putnam said, "Well, here is his evidence. Let's prove it." And it shouldn't take that.

My experience is that VA doctors don't know what the current science says today. They probably don't know, if we walked into—you pick it—VA anywhere in the United States and said, "Tell me about the findings of the Presidentially directed, VA-appointed Research Advisory Committee," they would not know what you were talking about. That is the first problem.

The second problem is adjudicators do not follow the law. And the undiagnosed illness law has been particularly harmful, because they have identified, basically, three diagnoses within the undiagnosed law that you can—if you get CFS, MCS, or irritable bowel syndrome, then you have undiagnosed illnesses. But you have to get the diagnosis of CFS to get undiagnosed illnesses. It is particularly harmful to veterans. It is confusing. The adjudicators don't know how to do it.

It is my experience that the first thing is, if you don't look, you don't find; if you don't educate the doctors, then they won't know how to diagnose; and if the adjudicators aren't trained properly and familiar with what the law says they are supposed to do, then the veterans' claims won't be approved.

Mr. HALLORAN. Mr. Binns, back to the three pending IOM studies, your testimony says that, as you read the law, those studies should have been passed by the Research Advisory Committee before being submitted to the IOM. Did you raise that issue with VA, and what was their answer?

Mr. BINNS. Yes, when we learned of the studies, I did bring it to the attention of Secretary Nicholson. Secretary Nicholson had been in office about 2 months at that time. I was shown a memo

from Undersecretary Perlin objecting to my objection. No action has been taken to review the appropriateness of the actions that have been started by VA.

Mr. SHAYS. Do you have a copy of that memo?

Mr. BINNS. No.

Mr. SHAYS. I would like to direct the subcommittee to get a copy of that.

Mr. HALLORAN. With that as background, describe, if you would, more broadly the committee's relationship with VA over the course of your service there. I mean, when was the first time you noticed this particular problem, and what was their response to that?

Mr. BINNS. This has been raised over 6 months ago. We actually, last year when the updated study on Sarin was presented, observed that it seemed bizarre that when the study was initiated solely because of new animal studies, animal studies were not taken into account in the basic conclusions.

But it was just after these new IOM studies were begun this spring that we read the law carefully and learned that, indeed, by law, animal studies were to be weighed with the same evidence as human studies.

Our broader relationship with VA's research office has been one of—I'd say initially, we were kept at arm's-length as much as possible. We were——

Mr. SHAYS. Excuse me, arm's-length between whom?

Mr. BINNS. Between the Research Advisory Committee and the Office of Research and Development. In the fall of 2002, for example, a new deployment health initiative was published by VA. We were never consulted prior to this initiative being put out, even though it clearly is a proposed plan within the plain meaning of the statute.

Then, with the appointment of Dr. Wray, who was briefly the chief research and development officer, we were more involved, in the sense that she actually came to our meetings; she paid attention to our work. And she was only in office for about 1 year.

Then, in 2004, as Steve just mentioned, we discovered halfway through the year that the VA, rather than planning up to $20 million in research, had planned for $400,000 in research. We brought that to the attention of Secretary Principi. He froze the VA research budget at that moment. And at that point in time, we began to get much higher levels of communication.

And if you remember the last time I appeared before you, in June 2004, we appeared to be on a true turnaround at VA, where a plan had been agreed upon, Dr. Perlin was involved in preparing it——

Mr. SHAYS. Let me just be clear. That was still under Secretary Principi?

Mr. BINNS. Yes, it was. And so, unfortunately, shortly thereafter, a new Acting Chief Research and Development Officer, Dr. Finn, took office, and we began to see that plan fall apart. And in November——

Mr. SHAYS. Again, who was the individual when you saw the plan fall apart?

Mr. BINNS. Dr. Steven Finn. He was the acting chief research and development officer for about 1 year.

In November, Secretary Principi announced the plan, as Steve mentioned, to do up to $15 million of new research in fiscal year 2005. As of—well, we were just recently given a report showing what the VA claimed to have funded in research in 2005. And as Steve said, while the total is $9 million, if you take out projects funded in previous years and ongoing projects, the total is only a few hundred thousand dollars at best.

Mr. SHAYS. Let me be clear. You are saying that the studies that were done in 2005 were just a continuation of projects begun earlier?

Mr. BINNS. Yes. In some cases, they were new studies, but they were studies which had actually been done under the 2004 initiative. And oddly enough, while VA takes credit for these as being evidence of new studies that are started, half of those studies related to stress. And they were the studies that caused Secretary Principi last November to say, "We are not going to fund stress on fiscal year 2005 studies." So to see them using those studies to take credit for what they did in fiscal year 2005 is extraordinary.

I should add that there is a new chief research officer, Dr. Coopersmith. And he has launched some—he has actually got a copy of the treatment development program that is ready to go. But we have seen them get to first base many times before.

This cycle varies depending upon, frankly, how many times Ross Perot calls the Secretary of Veterans Affairs. And if he hasn't called for a while, they seem to forget us, and they seem to forget Gulf war illness research. When he calls, then suddenly they become interested again.

So had this new effort by Dr. Coopersmith begun 3 years ago, I would be much more convinced that it represented a change in attitude. At this point in time, I have seen it too many times. Until there are actual results to report that make a difference, I don't believe these guys any more.

Mr. SHAYS. Have you been reappointed to this position?

Mr. BINNS. My term is up in January.

Mr. SHAYS. Are you term-limited? Could you be reappointed legally?

Mr. BINNS. Legally, I could be reappointed.

Mr. HALLORAN. Thank you. Drs. Henderson and O'Callaghan, attached to Mr. Binns' testimony—I don't know if you have seen it—but there is a list of the animal studies conducted in this realm from 1976 to, I think it is about 2004, including some of your work Dr. Henderson. And much of this is the body of work that Secretary Principi asked the IOM to review, to see what impact it might have on their earlier findings regarding Sarin exposure.

Help us understand what besides biologic plausibility, what other elements of missing epidemiological data can these animal studies help inform?

Dr. HENDERSON. Well, it defines the exposure level that was required to cause these effects.

Mr. HALLORAN. And can that be extrapolated to humans? I mean, mice are little things.

Dr. HENDERSON. You could do some modeling and try to extrapolate to humans. The missing information, of course, is what the humans were exposed to. So it indicates that you should look at the

potential exposures to low levels of Sarin as a potential cause for some of these effects, and that is a plausibility. But it opens the way for a lot of new research on how you could do therapy, how you could do interdiction techniques, etc.

Mr. HALLORAN. But in terms of what you understand about the IOM project—have you ever sat on an IOM committee?

Dr. HENDERSON. Yes, I have. Two.

Mr. HALLORAN. Oh, OK. So in terms of the process they are undergoing, in terms of these categories of association——

Dr. HENDERSON. Yes.

Mr. HALLORAN [continuing]. Is it, to use your word, irresponsible or bad science to use animal data to inform your conclusions about a factor other than biological plausibility?

Dr. HENDERSON. Well, I think, of course——

Mr. HALLORAN. That is where they seem to park it, and so I am just asking.

Dr. HENDERSON. Yes, I see what you are asking. It does contribute to the plausibility question. But it would also help with the dose/response information, which is a step further down the road. How much of this is required?

It also helps with the, you know, persistence and answering questions. Is this something that persists, or is it something that goes away very quickly?

But I think the dose/response information is probably the fundamental new information you get from those studies.

Dr. O'CALLAGHAN. Just generally, I would say we are living in an era of unprecedented advances in the neurosciences. And these advances are predicated in large measure on basic mechanistic work done in laboratory animals. And in a toxicological context, as Dr. Henderson already said, setting dose, setting dosing regimens for long-term exposures, and then looking for the most sensitive indicators of underlying effects that are adverse—for example, on the nervous system—are examples of what you can do in animal models, and why you would include those data.

Animal models are not always predictive, however, of the human condition. But you are interested in the broadest net being cast to get the answer to the problem.

Dr. HENDERSON. There is one more thing that I was thinking. In our studies, we found this lowering of serum cortisol levels is quite interesting as a potential biomarker of exposure that might be used in the field. In other words, if people came in, you could—you know, seeing this, you might associate it with exposure to nerve gases. We are still working on that, whether that is possible.

Mr. HALLORAN. If that is the case, lower cortisol levels, is that like a blood test, or is that a 36-hour PCR process?

Dr. HENDERSON. Well, I am not sure I understood your question.

Mr. HALLORAN. If lower cortisol levels were to be a biomarker for exposure——

Dr. HENDERSON. Yes.

Mr. HALLORAN [continuing]. Is the lower cortisol level easily detected? Or is it something you won't know for 36 or 48 hours or more, once we take blood or whatever we have to do?

Dr. HENDERSON. I think those are details that we would have to work out.

Mr. HALLORAN. You don't know.

Dr. HENDERSON. We don't know the answer to that.

Mr. SHAYS. Dr. O'Callaghan, I understand that the statement you delivered ultimately has to be approved, correct, by CDC?

Dr. O'CALLAGHAN. That is correct.

Mr. SHAYS. So what was taken out would be your view; not CDC's. I am interested to know, was there any part of your statement that was taken out that you felt fairly strongly about?

Dr. O'CALLAGHAN. As you know, as a government employee, this has to go up the chain of command—actually, quite high.

Mr. SHAYS. Right.

Dr. O'CALLAGHAN. And it has to even go over to the office of——

Mr. SHAYS. And let me just say something. You have a protection right now. You are under oath.

Dr. O'CALLAGHAN. Yes.

Mr. SHAYS. Let me just say it again. Every one of you is under oath. You have to respond accurately to the questions I ask. And I am not asking an unfair question. I am asking, just simply, was there an issue where your statement as approved by CDC varied from what you wanted in any noticeable or significant way? And if so, what area was that?

Dr. O'CALLAGHAN. That is a tough question. I would say maybe the emphasis that was placed more broadly on the potential data you can gain from human studies being——

Mr. SHAYS. So let me put it in my words. You were a little more enthusiastic than CDC would like about animal studies being helpful.

Dr. O'CALLAGHAN. Yes, and that is often the case with lab scientists putting forth their opinions.

Mr. SHAYS. Fair enough. Fair enough.

Dr. O'CALLAGHAN. OK.

Mr. SHAYS. You know, I am not describing any bad faith on the part of CDC.

Dr. O'CALLAGHAN. All right.

Mr. SHAYS. They want to be a little more cautious.

Dr. O'CALLAGHAN. Right.

Mr. SHAYS. Just wanted to know.

Dr. O'CALLAGHAN. Yes.

Mr. SHAYS. I want to go over one old territory just once more, to make sure that I am not incorrect on my knowledge and understanding.

I used to chair a subcommittee of this full committee that oversaw all the Department of Health—the FDA, CDC, and so on. My recollection has been—and we have had hearings since then, as well—that as a general rule, when bringing out a new drug, we would have experiments on animals. And at some point, when we think that we are ready to go to the marketplace, we take those drugs and have studies with human beings. Is that correct, Dr. O'Callaghan?

Dr. O'CALLAGHAN. Yes, it is.

Mr. SHAYS. Yes. But that presents a problem. For instance, if we wanted to have a prophylactic, a vaccine against some terrible biological agent, we could do it on animals, but then we may not—since there are no case studies of human beings contracting a par-

ticular disease, we are not going to inflict them with Polio—well, Polio, we had—but a particular biological agent. That would be unethical and wrong; correct?

Dr. O'CALLAGHAN. Correct.

Mr. SHAYS. Right. So we are faced with this difficult choice of going to the marketplace just with animal studies, in the cases of having certain vaccines. Is that correct?

Dr. O'CALLAGHAN. That is correct.

Mr. SHAYS. Right. And we have made a determination in a variety of issues to go to the marketplace without having human studies. I mean, this is the end result. Is that correct?

Dr. O'CALLAGHAN. That is correct.

Mr. SHAYS. OK. Now, in that case, we had no human studies to validate. Is it your understanding—and I will ask you, Mr. Binns and Dr. Henderson—is it your understanding that, as it relates to Gulf war illness, if we aren't able to use human studies, that this process of determining, in a sense, the veterans the benefit of the doubt, that there is no way we can give them the benefit of the doubt without animal studies? Is that a correct way for me to view this, in your opinion, Dr. O'Callaghan?

Dr. O'CALLAGHAN. For that purpose, most definitely, because there would be no other way to get adequate information that would be predictive of what would happen in man.

Mr. SHAYS. Dr. Henderson.

Dr. HENDERSON. I think, definitely, that is the only way.

Mr. SHAYS. A little louder, love.

Dr. HENDERSON. I think that is definitely true. That is the only way you can give the veterans the benefit of the doubt. And to protect them. I mean, we have found out things in animals about the interaction between the Pyridostigmine and the Sarin that wasn't known. You wouldn't find that in humans.

Mr. SHAYS. So just based on what the two of you have responded, this almost becomes a farce. If we are going to put veterans through this process without animal studies, they are never going to get the benefit of the doubt, unless there is just an arbitrary decision on the part of the Secretary to just say "OK." Mr. Binns, am I off track here, or on track?

Mr. BINNS. No, sir, let me answer by just giving you a very short example. If you would turn to Tab 11 of my statement——

Mr. SHAYS. Titled "Environmental Exposure Report?"

Mr. BINNS. Yes. This is the cover page of about a 2-inch-thick study done by the Department of Defense on environmental exposures in the Gulf—I say "on exposures;" this was done on one exposure, the exposure to pesticides.

And if you turn to the second page, you will see the conclusions: "It is likely that at least 41,000 service members may have been over-exposed to pesticides." And turn the page further: "Over-exposures to pesticides, particularly organophosphates and carbamates, may have contributed to the unexplained illnesses reported by some Gulf War veterans."

This is very clear language from a scientific study that was commissioned by our Government, and done exhaustively on all of the exposures of pesticides in the Gulf. This is not being considered by the IOM currently in its reports. To me, this is a much more valid

type of report on which to base evidence than the ones that have been produced using the complex language of the IOM reports.

Mr. SHAYS. Now, you may know, or may not know, so tell me if you know, and tell me if you are speculating, or tell me you don't know. Is it your statement before this subcommittee that the IOM chooses not to look at animal studies, or is prevented from looking at animal studies because of the way the VA has directed them?

Mr. BINNS. I do not know who set up the original categories of evidence. But whoever did, that has created the framework in which the IOM committees have operated.

Mr. SHAYS. OK. And the category of evidence is referred to by this statement in part?

Mr. BINNS. Yes. It is these standards which only could take into account human studies and human health effects.

Mr. SHAYS. OK. Let me ask each of you, to conclude. Is there any question we should have asked that we didn't? I want you to ask yourself the question; then I want you to answer the question. Is there any statement that you would like to make before we conclude?

You have two choices here. You can do both. But if there is a question we should have asked you that we didn't, I want you to ask yourself the question. I will start with you, Mr. Woods.

Mr. WOODS. No sir.

Mr. SHAYS. Thank you. Mr. Robinson.

Mr. ROBINSON. The question I would ask is: Why are we not moving forward when the science is pushing us in a direction? And why is the VA, the people who are supposed to take care of veterans and bind up the wounds of war—what excuse do they have for not knowing what the current science is? And what excuse do they have for not listening to the committee that was stood up, directed by the President, appointed by the VA, to help them in understanding these illnesses?

And the answer to my own question is: I don't know. But it is incredibly shameful. It is absolutely shameful that somebody in the VA can give Mike Woods placebo for real pain, and not tell him what it is, and he would go home and take it. It is shameful that—and I don't know how many other Gulf war veterans have been given this. We just found out about it. But it is shameful.

Mr. SHAYS. Yes, let me be clear. That was given to you by——

Mr. ROBINSON. The VA medical center in Orlando.

Mr. SHAYS. No, I am not asking you, Mr. Robinson. Mr. Woods, I'm sorry. Mr. Woods, it was given to you by whom?

Mr. WOODS. The VA medical center in Orlando, FL.

Mr. SHAYS. OK. And how do you know it is a placebo?

Mr. WOODS. It says "Obecalp," which spelled backward is "Placebo."

Mr. SHAYS. Now, let me just be very clear. Just so you know, you have a lot of credibility with me, but you are coming before a subcommittee under oath, and saying that was given to you by the VA?

Mr. WOODS. Correct.

Mr. SHAYS. OK. I just want to make sure you know. And when I ask the question this way, it puts more emphasis on you making

sure you are correct when you are further asked about this. And you will be further asked about this. OK. Thank you.

Mr. ROBINSON. Thank you.

Mr. SHAYS. I am going to end with you, Mr. Binns. So, Dr. Henderson, any question we should have asked that we didn't, that you would like to ask yourself? Any statement you would like to make, before we go to the next panel?

Dr. HENDERSON. I would just say for the future the question running around in my mind is: How do we integrate epidemiology and animal studies to get the most effective way to determine associations between exposures and effects, specific diseases?

Mr. SHAYS. And so your answer would be?

Dr. HENDERSON. My answer would be: We need to establish that new framework. And maybe the IOM could work on that, or the academies at least, in getting a better paradigm for integrating animal studies into epidemiology.

Mr. SHAYS. Thank you. Dr. O'Callaghan.

Dr. O'CALLAGHAN. Nothing to add, thank you.

Mr. SHAYS. Thank you. Mr. Binns.

Mr. BINNS. I would ask a question that you asked me, Mr. Chairman, a year and a half ago, at the hearing held in June that year, which was: Should this research responsibility be taken away from VA? It is apparent to me that there is a conflict of interest in VA conducting research which also has important benefits implications.

I think that same conflict extends to other branches of the Government. Therefore, I would recommend that Congress designate that this research be conducted outside of the Federal Government in the future, and managed by an independent organization outside of the Government.

Mr. SHAYS. You all have been very helpful witnesses. You have all contributed to our work. And frankly, a lot of what has been discussed today is alarming. Thank you all very much.

[Witnesses excused.]

Mr. SHAYS. Our next panel is Dr. Susan Mather, Chief Officer, Public Health and Environmental Hazards, Veterans Health Administration; accompanied by Dr. Mark Brown, Director of Environmental Agents Service, Department of Veterans Affairs; and Mr. Richard J. Hipolit, Assistant General Counsel, Department of Veterans Affairs.

Our second testimony is from Dr. Lynn Goldman, Professor of Occupational and Environmental Health, Department of Environmental Health Services, Johns Hopkins Bloomberg School of Public Health, Institute of Medicine; and Dr. Sam Potolicchio, Professor of Neurology, Department of Neurology, the George Washington University Medical Center, Institute of Medicine; accompanied by Ms. Susanne Stoiber, Executive Director, Institute of Medicine.

Ms. Stoiber, did I pronounce your name correctly?

Ms. STOIBER. Very close. "Stoiber" is exactly right.

Mr. SHAYS. Stoiber.

Ms. STOIBER. Uh-huh. It is an Austrian variant——

Mr. SHAYS. OK, well, you weren't taped, so we will try it again later.

But if I could ask you all to stand, and raise your right hands.

[Witnesses sworn.]

Mr. SHAYS. All witnesses respond in the affirmative. And let me just say before we start, I have respect for all of you on this panel. I have had many disagreements with some of you on this panel, but I have respect for all of you. And while Mr. Binns stated his concerns, which I share completely, I don't share all of his recommendations, and would want that to be part of the record.

But I am deeply concerned by what I heard from the first panel, as I think you can imagine I would be. And having been involved in the act in 1998, I do believe that there is no question about Congress' intent and the reason for Congress' intent. I don't think it is being lived up to, but I am willing to hear why I may be wrong. And I want you to testify in any way that you think we need to get this statement out properly for the record.

We are going to start with you, Dr. Mather. And it is important that you put on the record anything that you want. We are 5 minutes, but if you go another 5 minutes, it is important that you do whatever you need to do.

STATEMENTS OF SUSAN MATHER, M.D., MPH, CHIEF PUBLIC HEALTH AND ENVIRONMENTAL HAZARDS OFFICER, U.S. DEPARTMENT OF VETERANS AFFAIRS, ACCOMPANIED BY DR. MARK BROWN, DIRECTOR, ENVIRONMENTAL AGENTS SERVICE, AND RICHARD J. HIPOLIT, ASSISTANT GENERAL COUNSEL, U.S. DEPARTMENT OF VETERANS AFFAIRS; DR. LYNN GOLDMAN, PROFESSOR OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH, DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES, JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH, INSTITUTE OF MEDICINE; AND SAM POTOLICCHIO, M.D., PROFESSOR OF NEUROLOGY, DEPARTMENT OF NEUROLOGY, THE GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER, INSTITUTE OF MEDICINE, ACCOMPANIED BY SUSANNE STOIBER, EXECUTIVE DIRECTOR, INSTITUTE OF MEDICINE

STATEMENT OF SUSAN MATHER

Dr. MATHER. Thank you for that. Mr. Chairman and members of the subcommittee, I appreciate the opportunity to appear before you today to discuss the implementation of the Persian Gulf War Veterans Act of 1998. I will also briefly discuss the Veterans Programs Enhancement Act of 1998, and provide a status of the studies and reports on Gulf war health conducted by the National Academy of Sciences' Institute of Medicine.

Mr. Chairman, you expressed interest in the extent and weight given to data from animal studies in determinations of presumptive causality of disease. I want to assure you that both VA and NAS carefully consider all relevant peer-reviewed animal studies, and we believe that we are fully compliant with the relevant statutes.

In addition to VA's implementation of the Gulf War Veterans Act, VA also is charged with simultaneously implementing the Programs Enhancement Act, which establishes an overlapping framework for addressing issues relating to the health status of Gulf war veterans.

There are several instances where these statutes take seemingly different approaches to the study of health risks associated with

service in the Gulf war and to provisions of compensation as a result of that service. In view of the differences between the two statutes, on December 8, 1998, VA's General Counsel asked the Department of Justice for an opinion regarding VA's implementation of them.

On March 12th, 1999, Justice responded in part that the respective provisions of the two laws, ". . . although redundant and burdensome in some respects if both laws are given effect, are not inherently conflicting or mutually exclusive, and therefore the provisions of both laws must be treated as valid and effective." This is what we have tried to do.

Congress required VA to contract with NAS to conduct reviews of the scientific and medical literature on long-term health effects from exposure to environmental hazards associated with the 1991 Gulf war. These statutes list approximately 33 specific risk factors, or categories of risk factors, for consideration by NAS in its review process.

I understand that you are particularly interested in the contracts with NAS, including their status, terms, conditions, and timeliness. NAS has already reviewed many of the Gulf war environmental hazards in a series of four reports conducted under contract to the VA. The initial NAS report, issued in 2000, on Gulf war health issues reviewed health effects of depleted uranium, Sarin, Pyridostigmine Bromide, and vaccines.

We understand that the NAS committee selected those specific risk factors to start with at the suggestion of the Gulf war veterans following initial public meetings they arranged. To evaluate the NAS reports, VA established a taskforce whose members included the Undersecretaries for Health and for Benefits, the Office of General Counsel, and the Assistant Secretary for Policy, Planning and Preparedness.

Based on the taskforce's review, VA published a notice in the Federal Register, and informed Congress that the information provided by NAS did not warrant developing any new presumptive service connections.

The second NAS report, issued in 2002, reviewed health effects of insecticides and solvents used in the 1991 Gulf war. The Department is currently finalizing its notice announcing the Secretary's determination regarding that report.

The third NAS report, issued in 2004, reviewed health effects from fuels, combustion products such as smog, and propellants such as rocket fuels. VA's taskforce reviewed the report and provided recommendations to the Secretary.

The NAS reports released to date have addressed a wide array of potential exposures presenting different concerns. For example, the reports issued in 2002 and 2004 considered a number of environmental hazards that are generally well studied and not uncommon workplace or urban exposures; such as gasoline, smog, common pesticides, and cleaning solvents. They are known to cause specific illnesses, particularly among civilian workers who may have had very large exposures lasting over many years.

A few environmental hazards associated with the first Gulf war are more unusual; for example, the chemical warfare agent Sarin and depleted uranium, both of which were addressed in the 2000

report. Fortunately, IOM had a large amount of medical and scientific literature to review on health effects from exposure to these agents, including animal studies. Thus, in its initial 2000 review, and in the followup review in 2004, NAS did not identify any illnesses or disabilities for individuals exposed to trace levels of Sarin that may have occurred during the 1991 Gulf war.

VA's task in reviewing these reports is to decide whether additional presumptions of service-connected are warranted by current scientific evidence for particular diseases. This process would not in any way limit the right of any veteran under existing claim procedures to establish service connection on a direct basis, and with VA's assistance, for any disease that could be related to their service in the Gulf.

IOM is currently conducting three relevant studies: one, the infectious diseases associated with Gulf war and Southwest Asia; health effects from deployment-related stress, including veterans involved in the current conflict in Iraq, who are technically also Gulf war veterans, both to be completed in fiscal year 2006; and new clinical approaches to treating Gulf war veterans suggested by a complete review of all scientific publications on Gulf war veterans health, which is due in December 2005.

Psychological stress is being evaluated in part because it is seen as a major concern in the current Iraqi conflict, which is taking place in the same geographic area as the Gulf war.

IOM's studies will assess the health threats for troops serving in Iraq today, who share many hazardous exposures with prior Gulf war veterans. Psychological stress was chosen because it may be a major co-factor with other environmental health threats. For example, it is hypothesized that greater concentrations of an anti-chemical-warfare agent, PB, enter the brain during times of stress.

Because of concerns raised by a series of scientific publications that suggest that veterans from all eras may be at greater risk for ALS, in August VA asked IOM to look at evidence for increased risk of Lou Gehrig's Disease among all U.S. veterans, not just Gulf war veterans. This review will take an estimated 9 months to complete.

I would like to address a contractual relationship between VA and NAS, and the role of NAS in VA's decisionmaking process that translates Gulf war and health reports into health care disability compensation policies.

VA establishes the basic contracts with IOM to conduct its periodic reviews of the medical and scientific literature on Gulf war risk factors, according to the statutory requirements. It is important to reemphasize that after IOM completes one of its reviews, it is not involved in the Department's decisionmaking process.

Part of the value of IOM to both VA and veterans is its reputation for independence and scientific rigor. In support of this, VA does not provide precise guidance to IOM on how to conduct their studies, beyond the basic required contract which explicitly states the goal of the study. For information on how IOM incorporates the data from animal studies it reviews, VA defers to IOM; since it can best answer these questions.

From the onset, VA asks IOM to evaluate all available medical and scientific literature, which includes studies of both humans

and animals. The ultimate point of this process is to evaluate potential health effects relevant to veterans.

VA and IOM emphasize findings from human clinical and epidemiologic studies as being the most relevant to the veterans' health effects. Part of this distinction occurs because laboratory animals often do not respond to hazardous exposures in the same manner as humans; and therefore, it can be dangerous to predict clinical effects in humans based solely upon toxicologic observations in laboratory animals.

For example, in one IOM report, they describe a nearly 40fold range in toxicity of Sarin among various laboratory animals. It is difficult to say which, if any, of these results would be the most reliable predictor of human toxicity.

Animal studies are essential to planning relevant research studies. But the most useful data for predicting health effects in humans is based upon human studies.

In the absence of human studies, animal studies may become the logical starting point for considering potential human health effects. However, when there are numerous human studies available, they will probably be the most reliable predictors for future health effects among humans.

Finally, in cases where an effect is observed in an animal study but not observed in a well-conducted epidemiologic study, then the conclusion would have to be that the animal study is probably not clinically relevant to humans.

However, it would be erroneous to conclude that either IOM or VA somehow excludes data from animal studies from the consideration of possible health effects among humans. For example, in his 2003 letter to the IOM, former Secretary Principi requested an updated study on Sarin health effects focused upon new animal studies, and directed IOM to consider the new animal studies.

It is clear that the IOM committee reviewed numerous animal studies in reaching their conclusions. On pages 26 to 46 of the report, the IOM committee cites results from 101 animal studies and reviews. The committee also reviewed many directly applicable human studies, including studies of Gulf war veterans possibly exposed to Sarin as a result of the demolitions in Khamisiyah.

The human studies IOM analyzed were highly relevant to evaluating possible effects among Gulf war veterans. The non-Gulf war veterans studies reviewed were based upon U.S. military volunteers who had been exposed several decades ago to non-lethal doses of Sarin and other chemical warfare agents, on industrial workers with documented acute exposure to Sarin, and upon victims of the Sarin terrorist attacks in Japan in 1994 and 1995.

The committee also specifically reviewed the new published data from laboratory animals that had precipitated interest in an updated study of Sarin health effects mentioned by former Secretary Principi in his letter.

The committee concluded that the animal studies were an important step in determining whether a biologically plausible mechanism could underlie any long-term health effects of low exposure to chemical nerve agents, but more work needs to be conducted to elucidate potential mechanisms and clarify how the cellular effects are related to any clinical effects that might be seen.

VA has wide statutory authority to make such a determination based on sound medical and scientific evidence that is not limited to the IOM committee findings in determining presumption of illness. VA has responsibility for determining what weight to place upon various studies in reaching any health care or disability compensation policy conclusions, which are then published in the Federal Register at the same time Congress is informed.

Based upon this approach, VA complies with the statutory mandates to assess the extent and weight of data from human and animal studies in developing presumptive service connection policies.

Thank you again for the opportunity to be here. My colleagues and I will be glad to answer any questions you may have.

[The prepared statement of Dr. Mather follows:]

STATEMENT BY

SUSAN H. MATHER, MD MPH
CHIEF PUBLIC HEALTH AND ENVIRONMENTAL HAZARDS OFFICER
U.S. DEPARTMENT OF VETERANS AFFAIRS

BEFORE
THE SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS AND INTERNATIONAL RELATIONS,
COMMITTEE ON GOVERNMENT REFORM
U.S. HOUSE OF REPRESENTATIVES

NOVEMBER 15, 2005
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Mr. Chairman and members of the Committee, I appreciate the opportunity to appear before you today to discuss implementation of Public Law 105-277, the "Persian Gulf War Veterans Act" of 1998. I will also review VA's statutory obligations under section 101 of Public Law 105-368, the "Veterans Programs Enhancement Act of 1998", and will provide a status of the studies and reports on Gulf War Health conducted by the National Academy of Sciences' (NAS) Institute of Medicine (IOM).

Mr. Chairman, you expressed interest in hearing more about VA's compliance with the statutory mandate to assess the extent and weight of data from animal studies in determinations of presumptive causality of disease, not just the plausibility of a biological mechanism. While this will be discussed later in my testimony, I want to assure you that both VA and NAS carefully consider all relevant peer-reviewed animal studies, and we believe we are fully compliant with the relevant statutes.

VA's Statutory Obligations

In addition to VA's implementation of the "Persian Gulf War Veterans Act of 1998" (Gulf War Veterans Act), VA is also charged with simultaneously implementing the provision of section 101 of the "Veterans Programs Enhancement Act of 1998" (Programs Enhancement Act), which establishes an overlapping framework for addressing issues relating to the health status of Gulf War veterans. Thus, our

implementation of the former statute must take into account our responsibilities under the latter.

Although similar in purpose, there are several instances in which these statutes take seemingly different approaches to the study of health risks associated with service in the Gulf War and to provisions of compensation to veterans who may have incurred disability as a result of Gulf War service. In addition, the Gulf War Veterans Act contains a provision (section 1604) purporting to nullify "section 101 of the Veterans Programs Enhancement Act of 1998, or any similar provision of law enacted during the second session of the 105th Congress requiring an agreement with the National Academy of Sciences (NAS) regarding an evaluation of health consequences of service in Southwest Asia during the Persian Gulf War."

Section 101 of the Programs Enhancement Act requires VA to enter into a contract with NAS to conduct a review and evaluation of available scientific and medical information on the health status of Gulf War veterans and the health consequences of exposures to risk factors during service in the Gulf War, including identification of risk factors and the illnesses associated with such factors, as well as the illnesses that are manifest in such members to a higher degree than in comparison groups. The statute requires NAS to determine—to the extent that available scientific evidence permits—whether, for each illness identified, there is scientific evidence of an association with Gulf War service or exposure during Gulf War service to one or more risk factors. NAS is required to perform subsequent reviews of available evidence and data and to periodically report to VA and the Committees on Veterans' Affairs on its activities.

VA, in turn, is required to review each report from NAS and, based on that review, submit to the Committees on Veterans' Affairs a report on the available scientific and medical information regarding the health consequences of Gulf War service and of exposures to risk factors during service in the Gulf War. VA is required to include its recommendations as to whether there is sufficient evidence to warrant a presumption of service connection for the occurrence of a specified condition in Gulf War veterans.

While the Gulf War Veterans Act also includes requirements for VA to seek to enter into an agreement with NAS for the review of available scientific information regarding the health of Gulf War veterans and for preparation of biennial reports by NAS, there is a major distinction between the two statutes as to actions VA must take following receipt of a report from NAS. In particular, the Gulf War Veterans Act requires VA to determine, based on the NAS report, whether particular illnesses warrant a presumption of service connection and, if so, to promulgate regulations establishing a presumption of service connection for each such illness. This contrasts with the Programs Enhancement Act requirement that VA report to Congress any recommendations regarding the establishment of a presumption of service connection for any illness. In addition, the two acts differ in several respects concerning study details and the timing and submission of reports.

In view of the differences between the two statutes and the purported nullification provision in the Gulf War Veterans Act, on December 8, 1998, VA's General Counsel asked the Department of Justice, Office of Legal Counsel (OLC), for an opinion regarding VA's implementation of the two statutes.

On March 12, 1999, OLC responded that "(1) section 1604 of the [Gulf War Veterans Act] is constitutionally invalid and ineffective insofar as it purports to nullify certain described legislation (including section 101 of the [Programs Enhancement Act]) that might be enacted in the future; (2) under governing principles of statutory interpretation, every effort must be made to reconcile the provisions of two statutes enacted under the circumstances presented here before resorting to rules of construction for giving one primacy over the other; and (3) the respective provisions of the two laws . . . although redundant and burdensome in some respects if both laws are given effect, are not inherently conflicting or mutually exclusive, and therefore the provisions of both laws must be treated as valid and effective."

OLC determined that since the Program Enhancement Act was passed by Congress and signed into law by the President after the Gulf War Veterans Act, the Programs Enhancement Act constitutes the later enacted of the two statutes. Next, OLC determined that section 1604 of the Gulf War Veterans Act cannot constitutionally nullify the subsequent enactment of section 101 of the Programs Enhancement Act.

With respect to the areas of difference between the two statutes, OLC found the most significant variation to be the action required by VA after receiving a report from NAS. OLC determined that the two provisions are not mutually exclusive and that compliance with both of these provisions would not appear to be inordinately burdensome; therefore, VA must attempt to comply in good faith with both provisions. Consequently, VA must not only make an administrative determination with respect to creation of presumptions of service connection for particular diseases, but must also submit recommendations to Congress concerning the issue. In addition, OLC advised that compliance with both provisions will require VA to contract with NAS to address all study elements in both of the two provisions and to adhere to the earlier of any time-specific reporting requirements. In accordance with the opinion of OLC, VA has sought to give effect to both statutes in reviewing each of the reports of NAS.

The National Academy of Sciences' Institute of Medicine

The Institute of Medicine, within the National Academy of Sciences, was created and congressionally chartered more than a century ago to advise the Federal Government on scientific and technological matters. Congress has long recognized the unique scientific advisory contribution provided by IOM, and IOM conducts many studies that are statutorily required. IOM is the organization within NAS that conducts the studies required by both the Gulf War Veterans Act and the Programs Enhancement Act.

Because of IOM's independent status, VA has extensive experience relying upon the Institute for scientific and medical advice on a wide range of veterans' health issues, including health effects associated with (1) service in the Gulf War; (2) exposure to

Agent Orange during the Vietnam War; (3) exposure to mustard and Lewisite chemical warfare agents; and (4) participation in DoD's Project 112/SHAD. Of note, since 1991, IOM has completed eighteen independent reviews of the scientific and medical literature on Gulf War veterans' health (see attachment).

"Gulf War and Health" Reports Issued by the National Academy of Sciences

As I described earlier, Congress required VA to contract with NAS to conduct reviews of the scientific and medical literature on long-term health effects from exposure to environmental hazards associated with the 1991 Gulf War. Those statutes list approximately 33 specific risk factors or categories of risk factors for consideration by NAS in its review process. VA is further directed to determine if a presumption of service connection is warranted for any illness covered in a NAS report, and to publish a notice of that determination, including an explanation of its scientific basis.

I understand that you are interested in the contracts with NAS, including their status, terms, conditions and timelines. NAS has reviewed many Gulf War environmental hazards in a series of four reports conducted under contract to VA. I will briefly summarize this information, and will be happy to provide copies of the contracts and final reports to you.

The initial NAS report, issued in 2000, on Gulf War health issues reviewed health effects of depleted uranium, sarin, pyridostigmine bromide and vaccines. We understand that the NAS committee selected those specific risk factors for its initial review at the suggestion of Gulf War veterans following initial public meetings they arranged.

To evaluate the NAS report, VA established a Task Force whose members included the Under Secretaries for Health and for Benefits, the Office of General Counsel, and the Assistant Secretary for Policy, Planning and Preparedness. Based on the Task Force's review, VA published a notice in the Federal Register and informed

Congress that the information provided by NAS did not warrant developing any new presumptive service connections.

The second NAS report, issued in 2002, reviewed health effects of insecticides and solvents (for example, cleaning fluids) used in the 1991 Gulf War. In response, VA's Task Force reviewed the report and provided recommendations to the Secretary. The Department is currently finalizing its notice announcing the Secretary's determination regarding the report.

The third NAS report, issued in 2004, reviewed health effects from fuels (for example, gasoline), combustion products (for example, smog), and propellants (for example, rocket fuels). VA's Task Force reviewed the report and provided recommendations to the Secretary.

The NAS reports released to date have addressed a wide array of potential exposures presenting different concerns. For example, the reports issued in 2002 and 2004 considered a number of environmental hazards that are generally well-studied and not uncommon workplace or urban exposures, such as gasoline, smog, common pesticides and cleaning solvents. They are known to cause specific illnesses, particularly among civilian workers who may have had very large exposures lasting over many years.

A few environmental hazards associated with the first Gulf War are more unusual—for example, the chemical warfare agent sarin and depleted uranium, both of which were addressed in the 2000 NAS report. Fortunately, IOM had a large amount of medical and scientific literature to review on health effects from exposure to these agents, including animal studies. Thus, in its initial 2000 review and in a follow-up review in 2004, NAS did not identify any illness or disabilities for individuals exposed to trace levels of sarin or that may have occurred during the 1991 Gulf War.

VA's task in reviewing these reports is merely to decide whether additional presumptions of service connection are warranted by current scientific evidence for particular diseases. This process would not in any way limit the right of any veteran under existing claim procedures to establish service connection on a direct basis, and with VA's assistance, for any disease that could be related to their service in the 1991 Gulf War.

Current "Gulf War and Health" Studies

As part of its ongoing legislatively mandated review of Gulf War veterans' health issues, IOM is currently conducting three relevant studies:

- Infectious diseases associated with the Gulf War and Southwest Asia;
- Health effects from deployment-related stress (including veterans involved in the current conflict in Iraq who are technically also Gulf War veterans); and,
- New clinical approaches to treating Gulf War veterans suggested by a complete review of all scientific publications on Gulf War veterans' health.

As with all of the IOM "Gulf War and Health" literature reviews, the specific risk factors examined were selected by IOM, with approval by VA. IOM selects topics based on its analyses of the relevant health and scientific data issues, and of the availability of published literature for review. VA reviews the proposed areas of study only from the standpoint that they must be consistent with IOM's mandate to review Gulf War veterans' health issues as defined in the two relevant statutes. These three studies will be completed and IOM plans to provide them to VA during the current fiscal year.

In addition, VA agreed to contract for an IOM study on peer-reviewed published scientific research on Gulf War veterans as part of studies required by Public Laws 105-277 and 105-368, to look for possible improved medical treatments. The contract was approved May 11, 2004, and is estimated to be completed in December, 2005. The new IOM committee conducting a literature review to assess therapeutic options was formed following a recommendation from IOM to pursue a more comprehensive

evaluation of this issue and make clinical recommendations. This action falls within the IOM's mandate and is routine for IOM.

New IOM committees are formed as part of a long series of committees evaluating potential Gulf War health threats. According to the Gulf War Veterans Act, "Under the agreement . . . the National Academy of Sciences shall separately review, for each chronic undiagnosed illness identified . . . and for any other chronic illness that the Academy determines to warrant such review, the available scientific data in order to identify empirically valid models of treatment for such illnesses which employ successful treatment modalities for populations with similar symptoms." And, "Under the agreement . . . the National Academy of Sciences shall make any recommendations that it considers appropriate for additional scientific studies (including studies relating to treatment models) to resolve areas of continuing scientific uncertainty relating to the health consequences of exposure to toxic agents, environmental or wartime hazards, or preventive medicines or vaccines associated with Gulf War service."

Finally, psychological stress is being evaluated in part because it is seen as a major concern in the current Iraqi conflict, which is taking place in the same geographic area as the Gulf War. The committees conducting the three ongoing IOM studies will assess the health threats for troops serving in Iraq today, who share many hazardous exposures with prior Gulf War veterans. Psychological stress was added to the mix of potential health threats for IOM evaluation because it may be a major co-factor with other environmental health threats. For example, it is hypothesized that greater concentrations of anti-chemical warfare agent, PB, enter the brain during times of stress.

Future Studies

VA recently requested a study from IOM looking at evidence for increased risk of Lou Gehrig's disease among all U.S. veterans, not just Gulf War veterans. This study arose out of concerns raised by a series of recent scientific publications that suggest

that veterans from all eras may be at a greater risk for this disease. It will take an estimated 9 months to complete and was begun in August 2005.

Contractual Relationship Between VA and NAS

I would like to address the contractual relationship between VA and NAS, and the role of NAS in VA's decision-making process that translates its "Gulf War and Health" reports into health care and disability compensation policies. In a June 20, 2005, letter, this Subcommittee requested information on any correspondence from 1997 to 2004 between VA employees and any representatives of IOM regarding studies on Gulf War illnesses and related issues. VA provided its correspondence with representatives of IOM. This information primarily consisted of the basic contracts VA had established with IOM to conduct its periodic reviews of the medical and scientific literature on Gulf War risk factors, as spelled out in the two relevant statutes.

It is important to emphasize that after IOM completes one of its reviews, it is not involved in the Department's decision-making process. As I have noted, following receipt of each IOM report, VA establishes an internal Task Force to consider the report's policy implications. The Task Force in turn prepares recommendations for the Secretary to consider for VA's response.

Part of the value of IOM to both VA and veterans is its reputation for independence and scientific rigor. In support of this, VA does not provide precise guidance to IOM on how to conduct their studies beyond a basic required contract which explicitly states the goal of the study. For information on how IOM incorporates the data from the animal studies it reviews, VA defers to IOM since it can best answer these questions.

Human and Animal Studies Used in Establishing Veteran Disability Compensation Policy

From the outset, VA asks IOM to evaluate all available medical and scientific literature, which includes studies of both humans and animals. The ultimate point of this

process is to evaluate potential human health effects relevant to veterans. Consequently, for all health studies, including those related to the Gulf War, Vietnam veterans, veterans exposed to chemical agents such as mustard agent, and SHAD veterans, VA and IOM emphasize findings from human clinical and epidemiological studies as being the most relevant to the health effects we must anticipate among veterans. Part of this distinction occurs because laboratory animals often do not respond to hazardous exposures in the same manner as humans and, therefore, it can be dangerous to predict clinical effects in humans based solely upon toxicological observations of laboratory animals. For example, in one report IOM described a nearly 40-fold range in toxicity of sarin among various laboratory animals. It is difficult to say which, if any, of these results based upon animal studies would be the most reliable predictor of human toxicity.

Animal studies are essential for planning relevant research studies. But the most useful data for predicting health effects in humans is based upon human studies. In the absence of human studies, animal studies may become the logical starting point for considering potential human health effects. However, when there are numerous human studies available, they will likely be the most reliable predictors of future health effects among humans. Finally, in cases where an effect is observed in an animal study but not observed in a well conducted epidemiological study, then the conclusion would have to be that the animal study is probably not clinically relevant to humans. Approaches that emphasize human studies are consistent with all other biomedical research and the evaluation of clinical effects of drugs and other chemicals because human studies are more reliable than animal studies.

Nevertheless, it would be erroneous to conclude that either IOM or VA somehow excludes data from animal studies from the consideration of possible health effects among humans. For example, in his January 24, 2003, letter to IOM, former Secretary Principi requested an updated study on sarin health effects focused upon new animal studies, and directed IOM to consider the new animal studies:

"Recently, a number of new studies have been published on the effects of Sarin on laboratory animals. These studies have raised concerns with Gulf War veterans and other Americans regarding the relationship of these studies to possible health consequences of human exposures.

With this in mind, I am requesting IOM examine the medical and scientific literature on health effects of Sarin published since the 2000 Report. I ask that IOM report back to VA, as soon as possible, on whether this new research affects earlier conclusions of IOM on Sarin health effects."

On examination of this requested report, it is clear that the IOM committee reviewed numerous animal studies in reaching their conclusions. In chapter two, titled "Toxicology," of the 2004 report, "Gulf War and Health: Updated Literature Review of Sarin," (pages 26 to 46), the IOM committee cites results from 101 animal studies and reviews.

The committee also reviewed many, directly applicable human studies, including studies of Gulf War veterans possibly exposed to Sarin as a result of the demolitions at Khamisiyah, Iraq. The committee reviewed 19 epidemiological studies of sarin health effects. These included three studies of non-Gulf War veterans, four studies of Gulf War veterans potentially exposed at Khamisiyah, six population-based studies of U.S. and U.K. Gulf War veterans using self-reported exposures, and six studies of specific military units of Gulf War veterans also using self-reported exposures. They also reexamined all of the studies used in an earlier IOM report, issued in 2000, on Sarin health effects.

The human studies IOM analyzed were highly relevant to evaluating possible effects among Gulf War veterans. The non-Gulf War veteran studies reviewed were based upon U.S. military volunteers who had been exposed several decades ago to non-lethal doses of sarin and other chemical warfare agents; on industrial workers with

documented acute exposure to sarin; and upon victims of the sarin terrorist attacks in Matsumoto City in 1994 and Tokyo in 1995.

In reviewing published studies, the IOM committee based its determinations on the strength of the evidence of associations between compound exposure and human health effects as reported in those studies. The committee also considered other relevant issues, including exposure to multiple chemicals and genetic susceptibilities. According to its report, the committee's findings represent its collective judgment expressed "as clearly and as precisely as the available data allowed" by using previously established categories of association.

The committee also specifically reviewed the new published data from laboratory animals that had precipitated interest in an updated study of sarin health effects, mentioned by former Secretary Principi in his letter. The committee concluded that the animal studies were an important step in "determining whether a biologically plausible mechanism could underlie any long-term effects of low exposure to chemical nerve agents, but more work needs to be conducted to elucidate potential mechanisms and clarify how the cellular effects are related to any clinical effects that might be seen."

Following publication, the IOM committee provided a briefing to VA on its new report. At the briefing, the issue was raised that the IOM emphasis on human studies might possibly overlook health concerns revealed exclusively in laboratory animal studies. The chair of the IOM committee acknowledged this concern, but stated the committee thoroughly reviewed available animal studies, and concluded that taken together the studies failed to show consistent biological effects that could be plausibly tied to potential clinical effects in humans. He added that future animal studies might change this conclusion.

Finally, as I mentioned earlier, the VA Task Force has the responsibility to evaluate IOM committee reports and to decide if any new presumptive service connections are warranted. VA has wide statutory authority to make such a determination based on all

"sound medical and scientific evidence," and is not limited solely to the IOM committee findings. The VA Task Force places substantial weight upon the independent and authoritative IOM committee's findings, but it also considers other relevant information. VA has responsibility for determining what weight to place upon various studies in reaching any health care or disability compensation policy conclusions. Finally, VA publishes a notice in the Federal Register and informs Congress on these findings. Based upon this approach, VA complies with statutory mandates to assess the extent and weight of data from human and animal studies in developing presumptive service connection policies.

Thank you, again, for the opportunity to be here today. My colleagues and I would be happy to answer any questions that you may have.

Attachment:
Previous Studies Specifically on Gulf War Veterans' Health Conducted by IOM

1. "Gulf War and Health: Volume 3. Fuels, Combustion Products, and Propellants." Committee on Gulf War and Health, Literature Review of Selected Environmental Particulates, Pollutants, and Synthetic Chemical Compounds, Board on Health Promotion and Disease Prevention, Institute Of Medicine of The National Academies, The National Academies Press, Washington, D.C., 516pp, 2005.

2. "Gulf War and Health: Updated Literature Review of Sarin." Committee on Gulf War and Health: Updated Literature Review of Sarin, Board on Health Promotion and Disease Prevention, Institute of Medicine of *The National Academies,* The National Academies Press, Washington, D.C., 132pp, 2004.

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5. "An Assessment of the Safety of the Anthrax Vaccine: A Letter Report." Committee on Health Effects Associated with Exposures During the Gulf War, Institute of Medicine, Washington, D.C., 13pp, 2000.

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Mr. SHAYS. Thank you very much.
Dr. Goldman.

STATEMENT OF DR. LYNN GOLDMAN

Dr. GOLDMAN. Good afternoon, Mr. Chairman, and thank you for holding this hearing today. We really appreciate your interest in the health of the veterans.

I am Lynn Goldman. I am a professor of environmental health sciences at the Johns Hopkins School of Public Health. And as you know, I served as Chair of two of the Institute of Medicine Gulf War committees; one is the committee that is currently working on the report, "Gulf War and Health: Review of the Medical Literature," and another committee that produced the report, "Gulf War and Health: Fuels, Combustion Products, and Propellants." In addition, I was a member of the committee that produced "Gulf War and Health: Insecticides and Solvents." And therefore, I think that I am qualified to talk to you about this particular process.

I want to step back for a moment, and reflect on the four separate issues that I have heard discussed today. Because, Mr. Chairman, I think it is very important to understand that these are separate processes completely.

One is the implementation of the statutes that were enacted by this body with regards to how the veterans would utilize advice from the Institute of Medicine in determining compensation for Gulf war related illnesses.

But I have also heard questions with regards to how the research agenda is created, how veterans' physicians are educated, what they know about exposures in the Gulf; and also, even how do we protect soldiers in the future against harmful exposures. Those last three questions, I am not going to address in my testimony; not because I don't think they are important. I think they are exceedingly important questions that have been raised. I am going to merely talk about how the Institute of Medicine has provided advice under the statutes.

And I can assure you right from the get-go that at no time in any of the committees in which I have participated have I observed any interference by either the Department of Veterans Affairs or the Department of Defense. I think that is very important.

These have been independent scientific committees. The scientists involved wouldn't stand for that kind of interference for a moment. They wouldn't serve as volunteers, if they were serving under those conditions. And so, I just want to put that issue aside.

I think that the issue, though, that is of great importance is how we have evaluated the evidence; and particularly, how we have utilized animal studies in so doing.

As has been pointed out, the committees have used criteria in order to assign levels of evidence, categories of association for various exposures during the Gulf and subsequent illnesses, chronic illnesses that occur years after those Gulf war deployments. And we have been very concerned to make sure in doing that we can definitely form a linkage between those exposures and actual human disease.

In so doing, each committee has gone back to the categories of association, and labored over how it wanted to tailor those cat-

egories to its work. And in the committees that I have chaired and that I have been a member of, we have come back and back and back, both to the words and the statute, the charge from the VA and the categories of association; and worked those over, so that we felt that we were evaluating the evidence in a way that would be scientifically defensible, given the questions that we were being asked. I think it is also important to state that it is not at all true that animal studies have been ignored in this process.

Mr. SHAYS. I don't usually interrupt someone, but "given the questions we were asked" by whom?

Dr. GOLDMAN. Given the questions that we were asked by the legislation and by the VA in our statement of charge.

Mr. SHAYS. By the VA.

Dr. GOLDMAN. Which had to do with, again, exposures to substances during deployment and subsequent clinical illness years later. Those were the questions that we were looking at. And I think that those are, as I said before, very different questions than questions such as: How do you protect veterans in the future? How do you educate the physicians in the VA? What should be the research agenda for the VA? We were never asked those questions.

I think that it is important to state that we have relied not only on, of course, epidemiology and clinical evidence, but also animal evidence. And I want to explain a little bit about how we did that. In the first place, certainly, we never have felt—none of the committees have felt—that animal data could be used as a sole basis for answering that kind of question about an exposure to people and then later illness. We have never felt that we could rely on animal evidence alone.

Why is that? First, animal data can tell us about a category of health outcomes, without telling us exactly which disease will be created. And so we know from human studies that the chemical vinyl chloride causes a cancer called angiosarcoma of the liver. But when we give that substance to animals, we can see other cancers as well, such as cancer of the zymbal gland of the rat. Now, humans don't have a zymbal gland; so we are not going to get that cancer. And it is only through the human epidemiology studies that we can say it is a specific liver cancer that would be caused.

On the other hand—and this has been said earlier in testimony—those animal studies may be the best studies that we have for determining the potency, the dose response, how much dose gives you how much cancer. These animal studies are of vital importance for potency. But they can't tell you exactly which disease is going to be diagnosed in the person; and I think that is an important point, especially for cancers, birth defects, and certain other outcomes.

Second, many animal studies are not carried out in a way that is relevant to the experience. We are looking at exposures occurring at a certain point in time in people's lives; illnesses much later. Many animal studies involve chronic dosing, day after day after day, sometimes beginning in what would be the equivalent of childhood of the animals, and exposures that do not cease. Whereas in the Gulf experience, what we are concerned about is exposures that occur; cease; and then there is subsequent illness.

That is also a challenge with looking at many of the epidemiology studies, and something that we confronted as scientists over and over again in trying to do this charge.

The third point is that often times we actually relied on preexisting reviews of the animal toxicology. A lot of effort is gone into for some very well studied chemicals such as Benzene, which we looked at in the first committee I served on. Benzene has been reviewed again and again. And in those cases, we often relied on the work that authoritative bodies have already done to generally review the toxicology where it was not controversial, and then we picked out—our experts who were toxicologists picked out specific studies that they thought we needed to examine individually in order to do our reviews.

So again, no interference was ever observed by me by any government agency, or any other outside group, to this work. And second, while we did rely primarily on human studies, animal studies have also played a role.

And in closing, I do want to say that I think it is very important that you are undertaking this careful reassessment of this process. I do believe that this is a process that is very important to the health and well being of our veterans. And I also think that it is a process that does deserve to have careful oversight by Congress and by your subcommittee, and that oversight is most welcome. Thank you very much.

[The prepared statement of Dr. Goldman follows:]

Gulf War and Health – Institute of Medicine Reports

Testimony of

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and

Chair, Committee on Gulf War and Health: Review of the Medical Literature Relative to Gulf War Veterans Health
and
Chair, Committee on Gulf War and Health: Fuels, Combustion Products, and Propellants
and
Member, Committee on Gulf War and Health: Insecticides and Solvents
Board on Health Promotion and Disease Prevention
Institute of Medicine
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before the

Subcommittee on National Security, Emerging Threats, and International Relations
Committee on Government Reform
U.S. House of Representatives

November 15, 2005

Good morning Mr. Chairman and members of the subcommittee. Thanks to Congressman Shays, Congressman Kucinich and members of the house Subcommittee on National Security, Emerging Threats and International Relations for your concern about veteran's health. My name is Lynn Goldman. I am a professor of environmental health sciences and epidemiology at the Bloomberg School of Public Health at Johns Hopkins University in Baltimore and chair of our program in applied public health. Prior to joining Hopkins in 1999 I served for six years at the US Environmental Protection Agency (EPA) as Assistant Administrator for the Office of Prevention, Pesticides and Toxic Substances. My primary training is in pediatrics and epidemiology. I also have served as Chair of two Institute of Medicine (IOM) Gulf War committees: the committee that is currently working on the report *Gulf War and Health: Review of the Medical Literature Relative to Gulf War Veterans Health*, and the committee that produced the report *Gulf War and Health: Fuels, Combustion Products, and Propellants*. Additionally, I was a member of the committee that produced *Gulf War and Health: Insecticides and Solvents*. Because of my experience, the IOM requested that I testify about the approach taken by those committees, as well as other Gulf War and Health committees and Vietnam Veterans and Agent Orange (VAO) committees.

Those reports are part of a series of studies conducted by the IOM, a division of The National Academies, which have investigated the health effects of exposures that might have occurred during the Gulf War. They continue a long

history of the IOM applying its and its volunteers' scientific expertise to assist the Department of Veterans Affairs by evaluating scientific evidence and drawing conclusions regarding health effects associated with exposures to which our nation's veterans might have been exposed. On the basis of my own experience, it is my personal opinion that members of the committee take their responsibility to assess the scientific data in a fair and unbiased manner very seriously.

Today I would like to focus on two main points. First, from the perspective of a committee member and chair, how the IOM committee process works and the independence of IOM committees and second, the approach taken by the Gulf War committees, in particular the use of animal data.

IOM committees are comprised of expert volunteers and function independent of government oversight. At no time during the conduct of the Gulf War studies on which I was involved has anyone outside of the National Academies, including the Department of Veterans Affairs and the Department of Defense, and veterans, influenced the committee deliberations or the outcomes of the studies. Indeed the only outside guidance we have received has been in the form of (1) the legislation enacted by congress and signed into law by the President mandating that these studies be conducted, and (2) the scope of work that was established for each individual committee. Those items are indicated in the charge to the committee which is included in each report.

For each of the Gulf War reports, the expert committee members evaluated and interpreted literally thousands of peer-reviewed scientific publications that were identified through searches of databases. On the basis of their analyses and deliberations, the committees reached consensus conclusions on the potential associations between health outcomes and the agents of concern.

To fulfill the goals of the legislation, the approach taken to conduct the Gulf War studies is modeled after the approach taken for the Veterans and Agent Orange series of reports. At the same time, each newly-formed committee has needed to grapple with tailoring an approach to the challenges posed by the specific scientific issues put forward in the scope of work. Also, one difference between the Agent Orange studies and the Gulf War studies is the addition of a category of association, one of causality, to clarify that there is a difference scientifically between an association of an agent with a health outcome and an agent causing a health outcome. This category enhanced the scientific clarity of the committees' reports but did not change the criteria set forth by Congress. In practice, that category has rarely been invoked.

Each committee has needed to determine how to evaluate the various kinds of scientific evidence that are available. That decision is scientifically-based and is made by the committee with no external restrictions. When

available and of acceptable quality, epidemiology studies that have evaluated health effects in human populations exposed to chemicals of concern have been of great relevance to the work of all of these committees. However, for some outcomes and exposures, for example, contact dermatitis from exposure to certain chemicals, clinical case reports have played an important role; in most other circumstances such case reports have not been deemed acceptable.

Tables summarizing the committees' conclusions are presented in the Executive Summary of each Gulf War report. I submitted those tables as an appendix to the written portion of this testimony (see Appendix A).

We are aware that you are concerned about whether and how animal data have been utilized in our evaluations. Because of my previous involvement in a regulatory agency, I am well aware of the primary importance of such data in toxicological risk assessments for many chemicals, pesticides and radioactive materials. However, the various IOM committees, which have included toxicologists, have consistently agreed that, in general, animal data should not be used as a sole basis for drawing conclusions regarding health outcomes in humans. Why should this be the case? There are three reasons.

First, although animal data may indicate which category of health outcomes might occur in humans, it does not answer questions about specific medical diagnoses. Take vinyl chloride, a known human carcinogen. In humans it causes a rare cancer called angiosarcoma of the liver. But in laboratory rats it

causes an array of other cancers as well, including cancer of the zymbal gland, an organ that humans do not even possess. While such animal studies would be expected to give a more accurate determination of the potency of such a chemicals (given the lack of precise exposure measurements in human studies of vinyl chloride workers) it is only the human study that would provide the level of detail that is needed to conclude about specific health outcomes in humans. This issue is especially relevant to health outcomes like cancer and birth defects.

Second, animal studies may be carried out in ways that are not relevant to the Gulf War experience. Whereas the exposures in the Gulf were short term exposures to relatively low levels of chemicals and pesticides, most animal studies involve chronic doses to high levels of chemicals over much of a lifetime of an animal. These models are not appropriate to the experience in the Gulf.

Third, the Gulf War committees have often relied on pre-existing toxicology reviews for their reports. The Gulf War committees have been faced with evaluating the potential health effects of dozens of compounds that might have been used in the Gulf War. In some cases, prior expert committees have conducted extensive, peer-reviewed evaluation processes; these include reviews sponsored by: the Agency for Toxic Substances and Disease Registries (ATSDR), the EPA, the National Toxicology Program (NTP) and the World Health Organization (WHO). In such cases, where the effects of those chemicals in animals are well established and not contentious, Gulf War

committees have relied heavily on those summaries rather than consulting the thousands of original toxicology articles. If a toxicology study was particularly critical, such as an animal carcinogenicity study and the committee wanted more detail regarding the study than provided in a review document, the committee would evaluate the original study. In their reports, committees refer readers to summaries and reviews of the toxicology literature and provide details of any particularly relevant studies.

In closing I want to reiterate the main points of this testimony. First, the IOM committees that prepared the Gulf War reports work independently and decide as a committee how to approach the charge that they are given. Committees have a great deal of latitude in the interpretation and approach to its charge. Second, each committee decides how it will use epidemiology and toxicology data. In general, where adequate epidemiology data have been available, committees have decided that those data are the most appropriate on which to draw conclusions regarding the relationship of exposures to specific chemicals and potential health outcomes in humans. This process has been a productive one in that it has provided the Veteran's Administration with a wealth of information about the potential associations between agents in the Gulf War and the likelihood of subsequent adverse health effects in veterans. At the same time, as I noted in the preface to the last report that I chaired, which is attached (Appendix B), this is a process that is deserving of careful reassessment to

assure that the scientific expertise of the country is effectively engaged in the mission of assuring the health and wellbeing of our veterans.

I would like to thank you for inviting me to testify before this Subcommittee on National Security, Emerging Threats, and International Relations. Your careful scrutiny of this process is most welcome, I would be happy to answer any questions you have.

APPENDIX A:

Summary of Conclusions from Gulf War and Health Reports

TABLE 1 **Gulf War and Health Conclusions from Vols. 1, 2, 3 and Sarin Update**

TYPE OF CONCLUSION	GW&H Volume #	AGENT	HEALTH EFFECT
Sufficient Evidence of a Causal Relationship	2	Benzene	Acute leukemia Aplastic anemia
	1, Sarin	Sarin	Dose-dependent acute cholinergic syndrome that is evident seconds to hours subsequent to sarin exposure and resolves in days to months
Sufficient Evidence of an Association	1	Anthrax vaccination	Transient acute local and systemic effects
	2	Benzene	Adult leukemia
	1	Botulinum toxoid vaccination	Transient acute local and systemic effects
	3	Combustion products	Lung cancer
	2	Propylene glycol	Allergic contact dermatitis
	1	Pyridostigmine bromide	Transient acute cholinergic effects in doses normally used in treatment and for diagnostic purposes
	2	Solvents	Acute leukemia
Limited/Suggestive Evidence of an Association	2	Benzene	Non-Hodgkin's lymphoma
	2	Carbamates	Non-Hodgkin's lymphoma
Limited/Suggestive Evidence of an Association (continued)	3	Combustion products	Bladder cancer Cancers of the nasal cavity and nasopharynx Cancers of the oral cavity and oropharynx Incident asthma Laryngeal cancer Low birthweight/intrauterine growth retardation and exposure during pregnancy Preterm birth and exposure during pregnancy
	3	Hydrazines	lung cancer
	2	Insecticides	Allergic contact dermatitis
	2	Organophosphorus insecticides	Adult leukemia Non-Hodgkin's lymphoma OP poisoning and long-term neurobehavioral effects (that is, abnormal results on neurobehavioral test batteries and symptom findings)
	1	Sarin at doses sufficient to cause acute cholinergic signs	Symptoms and subsequent long-term health effects
	Sarin	Sarin at doses sufficient to cause acute cholinergic signs	Symptoms and a variety of subsequent long-term neurological effects

TYPE OF CONCLUSION	GW&H Volume #	AGENT	HEALTH EFFECT
	2	Solvents	Adult leukemia Bladder cancer Chronic glomerulonephritis Hepatic steatosis Multiple myeloma Myelodysplastic syndromes Neurobehavioral effects (that is, abnormal results on neurobehavioral test batteries and symptom findings)
	2	Tetrachloroethylene and dry-cleaning solvents	Bladder cancer Kidney cancer
Inadequate/ Insufficient Evidence to Determine Whether an Association Exists	2	Benzene	Myelodysplastic syndromes
	3	Combustion products	Colon cancer Esophageal cancer Female breast cancer Female genital cancers (cervical, endometrial, uterine, and ovarian cancers) Hepatic cancer Hodgkin's disease Kidney cancer Leukemia Male breast cancer Melanoma Multiple myeloma Myelodysplastic syndrome Nervous system cancers Non-Hodgkin's lymphoma Ocular melanoma Pancreatic cancer Prostatic cancer Rectal cancer Stomach cancer Testicular cancer

TYPE OF CONCLUSION	GW&H Volume #	AGENT	HEALTH EFFECT
Inadequate/ Insufficient Evidence to Determine Whether an Association Exists (continued)	3	Fuels	Bladder cancer Cancers of the nasal cavity and nasopharynx Cancers of the oral cavity and oropharynx Colon cancer Esophageal cancer Female breast cancer Female genital cancers (cervical, endometrial, uterine, and ovarian cancers) Hepatic cancer Hodgkin's disease Kidney cancer Laryngeal cancer Lung cancer Male breast cancer Melanoma Multiple myeloma Myelodysplastic syndromes Nervous system cancers Non-Hodgkin's lymphoma Nonmelanoma skin cancer Pancreatic cancer Prostatic cancer Rectal cancer Stomach cancer Testicular cancer
Inadequate/ Insufficient Evidence to Determine Whether an Association Exists (continued)	2	Insecticides	Aplastic anemia Brain and other central nervous system cancers Kidney cancers Lung cancer Pancreatic cancer Prostate, testicular, or bladder cancers Soft tissue sarcomas
	2	Insecticides and solvents	Amyotrophic lateral sclerosis Alzheimer's disease Hepatobiliary cancers Hodgkin's disease Irreversible cardiovascular outcomes Male or female infertility after cessation of exposure Multiple myeloma Parkinson's disease Peripheral neuropathy Persistent respiratory symptoms or impairment after cessation of exposure
	2	Insecticides (parental preconception exposure)	Childhood leukemias, brain and other central nervous system cancers, and non-Hodgkin's lymphoma Congenital malformations Spontaneous abortion or other adverse pregnancy outcomes
	2	Lindane and solvents	Breast cancer

TYPE OF CONCLUSION	GW&H Volume #	AGENT	HEALTH EFFECT
	1	Pyridostigmine bromide	Long-term adverse health effects
	1	Sarin at low doses insufficient to cause acute cholinergic signs	Symptoms and subsequent long-term adverse health effects
	Sarin Update	Sarin at low doses insufficient to cause acute cholinergic signs	Subsequent long-term cardiovascular effects Symptoms and subsequent long-term adverse neurological health effects
Inadequate/ Insufficient Evidence to Determine Whether an Association Exists (continued)	2	Solvents	Alterations in liver function tests after cessation of exposure Bone cancer Chronic pancreatitis and other persistent gastrointestinal outcomes Cirrhosis Long-term hearing loss Long-term reduction in color discrimination Long-term reduction in olfactory function Melanoma or nonmelanoma skin cancer Multiple sclerosis Oral, nasal, or laryngeal cancer Ovarian or uterine cancer Prostate cancer Stomach, rectal, or pancreatic cancer Systemic rheumatic diseases: scleroderma, rheumatoid arthritis, undifferentiated connective tissue disorders, and systemic lupus erythematosus
	2	Solvents other than tetrachloroethylene and dry-cleaning solvents	Esophageal cancer Bladder cancer Lung cancer
	2	Solvents other than trichloroethylene	Cervical cancer
	2	Solvents other than trichloroethylene and mixtures of benzene, toluene, and xylene	Colon cancer
	2	Solvents, parental preconception exposure	Congenital malformations Neuroblastoma and childhood brain cancers Spontaneous abortion or other adverse pregnancy outcomes
Inadequate/ Insufficient Evidence to Determine Whether an Association Exists (continued)	2	Solvents: specific, other than benzene	Acute and adult leukemia Aplastic anemia Brain and other central nervous system cancers Non-Hodgkin's lymphoma

TYPE OF CONCLUSION	GW&H Volume #	AGENT	HEALTH EFFECT
	1	Uranium	Bone cancer Cardiovascular effects Dermal effects Effects on hematological parameters Gastrointestinal disease Genotoxic effects Hepatic disease Immune-mediated disease Lymphatic cancer Musculoskeletal effects Nervous system disease Nonmalignant respiratory disease Ocular effects Reproductive or developmental dysfunction
	1	Uranium at higher levels of cumulative exposure (>200 mSv or 25 cGy)	Lung cancer
	1	Vaccination: anthrax	Long-term adverse health effects
	1	Vaccination: botulinum toxoid	Long-term adverse health effects
	1	Vaccinations: multiple	Long-term adverse health effects
Limited/Suggestive Evidence of No Association	1	Uranium at cumulative internal dose levels lower than 200 mSv or 25 cGy	Lung cancer
	1	Uranium	Clinically significant renal dysfunction
Consensus Not Reached on Category of Association	2	Tetrachloroethylene and dry-cleaning solvent	Esophageal cancer Lung cancer
	2	Trichloroethylene	Colon cancer Cervical cancer
	2	Mixtures of benzene, toluene, and xylene	Colon cancer
	2	Solvents	Kidney cancer
	2	Benzene and solvents	Brain and other central nervous system cancers
	2	Solvents, Parental preconception exposure	Childhood leukemia
	2	Organophosphorous insecticide exposure without OP poisoning	long-term neurobehavioral effects (that is, abnormal results on neurobehavioral test batteries and symptom findings)

APPENDIX B - Preface from:

Gulf War and Health Volume 3: Fuels, Combustion Products, and Propellants

PREFACE

As this report goes to press and our country is engaged in a war in Iraq, it is important to recall the 1990-1991 Gulf War. Engaging around 700,000 US military personnel, the Gulf War was of brief duration and entailed very few casualties among US troops. Yet, as they say, "war is hell", and our troops were exposed to numerous traumatic events and a multitude of hazardous substances. Not long after the war ended, many of its veterans reported a variety of chronic symptoms. Numerous studies were conducted, most of which corroborated reports of higher rates of signs and symptoms among these veterans. Some of the signs and symptoms have clearly been associated with identifiable medical diagnoses such as post-traumatic stress disorder and depression; others are outside current medical diagnostic classifications.

Veterans have been deeply concerned about whether exposures in the gulf were associated with chronic health problems after the end of the war. In response to their concerns, the Department of Veterans Affairs (VA) and Congress secured the assistance of the Institute of Medicine (IOM) in evaluating the scientific literature regarding exposures that may have occurred in the Gulf War. In a sense, this approach followed a model developed for the Vietnam War, after which there was concern about the possible health effects of exposure to dioxins in Agent Orange. In that case, the work of IOM has played a key role in informing VA decisions regarding compensation for dioxin-related chronic health effects. Following that model, Congress enacted legislation that specifically directed IOM to evaluate the effects of 33 agents; this report covers a small number of the agents: hydrazines, red fuming nitric acid, hydrogen sulfide, oil-fire byproducts, and diesel-heater fumes. In addition, VA requested that we assess potential exposures to fuels that were used in the Gulf War (gasoline, jet fuel, diesel fuel, and kerosene) and their combustion products.

Although we had a relatively small number of substances to review, the scientific literature on air pollutants from fuel combustion, as well as from exposure to fuels, is extensive. IOM appointed a committee with knowledge in the toxicology and epidemiology of fuels and combustion products; it included experts in combustion chemistry, rocket propellants, immunology, pulmonology, cancer, neurosciences, dermatology, and reproductive and developmental toxicology. The committee did not limit itself to studies of Gulf War veterans but rather reviewed all relevant literature with regard to chronic medical effects of exposure. Although the committee focused on epidemiologic studies, which are likely to identify associations between specific exposures and diagnoses in people, it also placed weight on toxicologic studies and on

clinical case series that were informative about specific exposure-disease relationships. Along the lines of earlier Gulf War reports, the committee has framed its conclusions in categories of strength of association. Despite the extensive challenge of reviewing the literature and the diversity of expertise and views among committee members, the committee was able to reach consensus on all conclusions. For that, I am most grateful.

The committee identified several associations between exposures to rocket propellants and combustion products and disease. However, there is some concern among our members about the direction that the process has taken. Many of the substances to which there was potential exposure in the gulf are unique to war service (for example, nerve agents, mustard agents, and rocket propellants), but others are not and may be at least as likely to occur in noncombat military service or in civilian life as in war (for example, fuels, air pollutants, and the solvents and pesticides reviewed in *Gulf War and Health, Volume 2: Insecticides and Solvents*). Therefore, as the process has evolved from an examination of exposures unique to wartime to exposures that are ubiquitous and may be even greater in civilian life, what are VA and Congress to do with the results of this study? A second troubling issue is the lack of exposure information for individual veterans; given that many risks are clearly exposure-related, it is difficult to use the results of our review to assess whether veterans' illnesses are due to such exposures. Third, it is important to interpret the results of our review in a larger context of public health and prevention; for example, the committee found some evidence of an association between hydrazine exposure and lung cancer, but there obviously are much larger and better-established associations between lung cancer and other exposures, such as smoking and exposure to radon and asbestos. Given those circumstances, this report cannot answer the question of whether service in the gulf was associated with such exposures and whether specific health outcomes are due to the exposures. Despite those limitations, the committee hopes that its report will be helpful to all who may have been exposed to the substances in question and to those who are considering further research in the subject.

I am deeply appreciative of the expert work of our committee members, and it has been a privilege and a pleasure to work with the IOM staff. Without them, this report would not have been possible.

Lynn Goldman, MD, MPH, *Chair*

Mr. SHAYS. Thank you, Doctor.
Dr. Potolicchio.

STATEMENT OF SAM POTOLICCHIO

Dr. POTOLICCHIO. Good morning, Mr. Chairman, again, and members of the subcommittee. I am Dr. Samuel Potolicchio. I am a clinical neurologist with the George Washington University Hospital.

In addition, I have been a volunteer member of committees that produced or are currently preparing the following four Institute of Medicine reports: "Gulf War and Health: Review of the Medical Literature Relative to Gulf War Veterans Health," "Gulf War and Health: Fuels, Combustion Products, and Propellants," "Gulf War and Health: Insecticides and Solvents," "Gulf War and Health: Depleted Uranium, Pyridostygmine Bromide, Sarin, Vaccines," and the "Gulf War and Health: Updated Literature of Sarin." It was a long road.

Because of my experience on those committees, and in particular my work on the Sarin report, the IOM requested that I testify on the work of the Sarin committee. I am the longest-living member, I think. I appreciate this opportunity to speak with you about the Sarin report.

The Sarin report was conducted following a request from the Department of Veterans Affairs to update an earlier report on the potential human health effects of Sarin. That request followed the publication of a series of toxicology studies on rats looking at the effects of relatively low concentrations of Sarin.

Sarin, as everyone knows, is a highly toxic nerve agent produced for chemical warfare. Sarin can be fatal within minutes to hours. It is a member of a class of chemicals known as "organophosphorus compounds."

In humans and other animals exposure to high doses of Sarin produces a well-characterized syndrome, the acute cholinergic syndrome, featuring a wide variety of signs and symptoms, including: increased salivation; lacrimation, or increased tears; perspiration, even bloody tears; blurring of vision; nausea; vomiting; diarrhea and fecal incontinence; excessive secretions in the bronchi and respiratory system; tightness in the chest; cough; tachycardia, or quickened heart rate; increased blood pressure; drowsiness and lethargy; mental confusion; headache; coma; and convulsions. It is important to remember that the acute cholinergic syndrome is a very serious effect that requires medical attention and can lead to death.

I would like to note that, as with the committees discussed by Dr. Goldman, at no time during the preparation of "Gulf War and Health: Updated Literature Review of Sarin" did anyone outside of the committee process influence the work, deliberations, or outcomes of the studies.

In drawing its conclusions, the Sarin update committee evaluated relevant studies that were identified in searches of data bases that identified approximately 250 articles that were potentially relevant to the committee's charge. Those articles included studies in humans and in animals. On the basis of those studies, the committee reached its conclusions.

The committee, as with previous Gulf war and health committees, made conclusions regarding the existence of the acute cholinergic syndrome following Sarin exposure, the existence of persistent effects in individuals exposed to Sarin who had the acute cholinergic syndrome, and the existence of persistent effects in individuals exposed to Sarin who did not have any signs of having had the acute cholinergic syndrome.

The first conclusion is that there is definitely sufficient evidence of a causal relationship between exposure to Sarin and a dose-dependent effect, seen at high doses, of acute cholinergic syndrome that is evident in seconds to hours after Sarin exposure and resolves in days to months.

That conclusion is based on data from humans exposed to Sarin, and is supported by data in animals and on organophosphorus pesticides which are related chemically to Sarin.

The second conclusion is that there is limited, suggestive evidence of an association between exposure to Sarin at doses sufficient to cause the acute cholinergic signs and symptoms, and a variety of subsequent long-term neurological effects. As with the previous conclusion, that conclusion is based on data from humans exposed to Sarin, and is supported by data in animals and data on organophosphorus pesticides.

And finally, the committee concluded that there is inadequate, insufficient evidence of an association between exposure to Sarin at low doses insufficient to cause acute cholinergic signs and symptoms, and subsequent long-term adverse health effects; specifically, neurologic and cardiovascular effects. That conclusion was based on a lack of data in humans or animals.

I will focus on this last conclusion; as the first two conclusions are relatively well established, and not controversial.

As with other Gulf war and health committees, the Sarin update committee first reviewed the human studies. There were data from studies of United States and U.K. servicemen who several decades ago—between the years of 1958 through 1984—volunteered to be exposed to chemical weapons, including Sarin. It also included industrial workers with documented acute, high-dose exposures to Sarin; victims of the Sarin terrorist attacks on Japanese subway systems; and studies of Gulf war veterans.

All of those studies, with the exception of the studies of Gulf war veterans, focused on the effects in individuals who had shown the signs and symptoms of the acute cholinergic syndrome, and therefore do not provide information on the effects of Sarin at concentrations below those that cause the acute cholinergic syndrome.

The studies conducted in Gulf war veterans—including United States, U.K., Danish, and Canadian veterans—were not very useful in making specific conclusions regarding the health effects of Sarin, because many do not have objective assessments of exposure to Sarin—for instance, many rely on self-reports of exposures in surveys taken years after the war, or are in individuals not deployed to the Gulf until after any of the potential exposures to Sarin are thought to have occurred—or have other problems with the exposure assessment. In addition, no health outcomes were consistently seen in those studies.

Given the limitations of the epidemiology studies, the committee then reviewed the available toxicology data, focusing on those studies conducted with doses below those that cause the signs and symptoms of acute cholinergic syndrome, to draw conclusions related to lower exposure to Sarin and health effects.

Although few studies have evaluated the effects of such doses, a recent series of studies by Dr. Rogene Henderson, which are the studies that prompted the IOM Sarin update, have evaluated the effects of low-dose Sarin exposure in rats.

Those studies did show some alterations in some subtypes of a specific family of receptors in certain areas of the rats' brains. But no consistent and persistent effects were seen in the levels of the neurotransmitters and on behavioral parameters in the rats.

The data on receptors indicate further research areas, but are not correlated with any particular health outcome in rats; let alone humans. Those data on receptor density, therefore, are not sufficient to indicate an association with a human health effect; especially given the fact that behavioral effects were not seen in rats treated with Sarin at the same concentration. Animal studies by other researchers looking at low-dose effects also showed inconsistent, if any, effects.

In summary, the committee concluded that there is sufficient evidence of a causal relationship between exposure to high amounts of Sarin and the acute cholinergic syndrome, and there is limited, suggestive evidence of an association between exposure to Sarin at those high levels that cause the acute cholinergic syndrome and a variety of subsequent long-term neurologic effects.

However, given the few epidemiology studies, the limitation of those studies that look at the effects of exposure to low concentrations of Sarin, and the limited number of relevant toxicology studies and their inconsistent results, the committee concluded that there was inadequate, insufficient evidence to determine if there is an association between exposure to Sarin at levels that do not cause the acute cholinergic syndrome and any human health effects.

Those conclusions were based on available scientific data, and they were made by the committee without any external pressures or interference.

With that, I would once again like to thank you for inviting me to testify before this subcommittee. I appreciate the work of this subcommittee on National Security, Emerging Threats, and International Relations, and am happy for your interest in this important area of veterans' health. I look forward to answering any questions you might have.

[The prepared statement of Dr. Potolicchio follows:]

Gulf War and Health: Updated Literature Review of Sarin

Testimony of

Samuel Potolicchio, MD
Professor and Clinical Neurologist
The George Washington School of Medicine
Washington, DC

and

Member, Committee on Gulf War and Health: Review of the Medical Literature Relative to Gulf War Veterans Health
and
Member, Committee on Gulf War and Health: Fuels, Combustion Products, and Propellants
and
Member, Committee on Gulf War and Health: Insecticides and Solvents
and
Member, Committee on Gulf War and Health: Depleted Uranium, Pyridostygmine Bromide, Sarin, Vaccines
and
Member, Committee on Gulf War and Health: Update Literature Review of Sarin
Board on Health Promotion and Disease Prevention
Institute of Medicine
The National Academies

before the

Subcommittee on National Security, Emerging Threats, and International Relations
Committee on Government Reform
U.S. House of Representatives

November 15, 2005

Good morning Mr. Chairman and members of the subcommittee. I am Dr. Samuel Potolicchio. I am a clinical neurologist with The George Washington University Hospital. In addition, I have been a volunteer member of the committees that produced or are currently preparing the following four Institute of Medicine (IOM) reports: *Gulf War and Health: Review of the Medical Literature Relative to Gulf War Veterans Health*; *Gulf War and Health: Fuels, Combustion Products, and Propellants*, *Gulf War and Health: Insecticides and Solvents; Gulf War and Health: Depleted Uranium, Pyridostygmine Bromide, Sarin, Vaccines*; and *Gulf War and Health: Updated Literature of Sarin*. Because of my experience on those committees and, in particular, my work on the sarin report, the IOM requested that I testify on the work of the sarin committee. I appreciate this opportunity to speak with you about the sarin report.

The sarin report was conducted following a request from the Department of Veterans Affairs (VA) to update an earlier report on the potential human health effects of sarin. That request followed the publication of a series of toxicology studies in rats looking at the effects of relatively low concentrations of sarin. Sarin is a highly toxic nerve agent produced for chemical warfare. Sarin can be fatal within minutes to hours. It is a member of a class of chemicals known as organophosphorous compounds. In humans and other animals, exposure to high doses of sarin produces a well-characterized syndrome, the acute cholinergic syndrome, featuring a wide variety of signs and symptoms, including: increased salivation, lacrimation (increased tears) and perspiration, "bloody tears", blurring

of vision, nausea, vomiting, diarrhea and fecal incontinence, excessive secretions in the bronchi (respiratory system), tightness in chest, cough, tachycardia (quickened heart rate), increased blood pressure, drowsiness and lethargy, mental confusion, headache, coma and convulsions. It is important to remember that the acute cholinergic syndrome is a very serious effect that requires medical attention and can lead to death.

I would like to note that, as with the committees discussed by Dr. Goldman, at no time during the preparation of *Gulf War and Health: Updated Literature Review of Sarin*, did anyone outside of the committee process influence the work, deliberations or outcomes of the studies.

In drawing its conclusions, the sarin update committee evaluated relevant studies that were identified in searches of databases that identified approximately 250 articles that were potentially relevant to the committee's charge. Those articles included studies in humans and animals. On the basis of those studies the committee reached its conclusions.

The committee, as with previous Gulf War and Health committees, made conclusions regarding the existence of the acute cholinergic syndrome following sarin exposure, the existence of long-term effects in individuals exposed to sarin who had the acute cholinergic syndrome, and the existence of long-terms effects

in individuals exposed to sarin who did not have any signs of having had the acute cholinergic syndrome.

The first conclusion is that there is sufficient evidence of a causal relationship between exposure to sarin and a dose-dependent (effect seen at high doses) acute cholinergic syndrome that is evident seconds to hours after sarin exposure and resolves in days to months. That conclusion is based on data from humans exposed to sarin and is supported by data in animals and on organophosphorous pesticides, which are related chemically to sarin.

The second conclusion is that there is limited/suggestive evidence of an association between exposure to sarin at doses sufficient to cause the acute cholinergic signs and symptoms and a variety of subsequent long-term neurologic effects[1]. As with the previous conclusion, that conclusion is based on data from humans exposed to sarin and is supported by data in animals and data on organophosphorous pesticides.

Finally, the committee concluded that there is inadequate/insufficient evidence of an association between exposure to sarin at low doses insufficient to cause acute cholinergic signs and symptoms and subsequent long-term adverse health effects (specifically, neurologic and cardiovascular effects). That

[1] Many health effects are reported in the literature to persist after sarin exposure: fatigue, headache, visual disturbances (asthenopia, blurred vision, and narrowing of the visual field), asthenia, shoulder stiffness, and symptoms of PTSD. Sarin exposure has been followed by abnormal test results, of unknown clinical

conclusion was based on a lack of data in humans or animals. I will focus on this last conclusion, as the first two conclusions are relatively well established and not controversial.

As with other Gulf War and Health committees, the sarin update committee first reviewed the human studies. There were data from studies of U.S. and U.K. servicemen who several decades ago (1958 through 1984) volunteered to be exposed to chemical weapons, including sarin; industrial workers with documented acute, high-dose exposures to sarin, victims of the sarin terrorist attacks in Japan, and studies of Gulf War veterans. All of those studies, with the exception of the studies of Gulf War veterans, focused on the effects in individuals who had shown the signs and symptoms of the acute cholinergic syndrome and, therefore, do not provide information on the effects of sarin at concentrations below those that cause the acute cholinergic syndrome.

The studies conducted in Gulf War veterans—including U.S., U.K., Danish, and Canadian veterans—were not very useful in making specific conclusions regarding the health effects of sarin because many do not have objective assessments of exposure to sarin (e.g., many rely on self-reports of exposures in surveys taken years after the war or are in individuals not deployed to the Gulf War until after any of the potential exposures to sarin are thought to

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significance, on the digit symbol test of psychomotor performance, EEG records of sleep, event-related potential, visual evoked potential, and computerized posturography.

have occurred) or have other problems with the exposure assessment. In addition, no health outcomes were consistently seen in those studies.

Given the limitations of the epidemiology studies, the committee then reviewed the available toxicology data, focusing on those studies conducted with doses below those that cause the signs and symptoms of the acute cholinergic syndrome to draw conclusions related to lower exposure to sarin and health effects. Although few studies have evaluated the effects of such doses, a recent series of studies by Dr. Rogene Henderson, which are the studies that prompted the IOM sarin update, have evaluated the effects of low-dose sarin exposure in rats. Those studies did show some alterations in some subtypes of a specific family of receptors in certain areas of the rats' brains, but no consistent and long-term effects were seen in the levels of the neurotransmitters and on behavioral parameters in the rats. The data on receptors indicate further research areas, but are not correlated with any particular health outcome in rats, let alone humans. Those data on receptor density, therefore, are not sufficient to indicate an association with a human health effect, especially given the fact that behavioral effects were not seen in rats treated with sarin at the same concentration. Animal studies by other researchers looking at low-dose effects also showed inconsistent, if any, effects.

In summary, the committee concluded that there is sufficient evidence of a causal relationship between exposure to high amounts of sarin and the acute

cholinergic syndrome and there is limited/suggestive evidence of an association between exposure to sarin at those high levels that cause the acute cholinergic syndrome and a variety of subsequent long-term neurologic effects. However, given the few epidemiology studies, the limitations of those studies that look at the effects of exposure to low concentrations of sarin (i.e., below those that cause the acute cholinergic syndrome), and the limited number of relevant toxicology studies and their inconsistent results, the committee concluded that there was inadequate/insufficient evidence to determine if there is an association between exposure to sarin at levels that do not cause the acute cholinergic syndrome and any human health effects. Those conclusions were based on available scientific data and they were made by the committee without any external pressures or interference.

With that, I would once again like to thank you for inviting me to testify before this subcommittee. I appreciate the work of this Subcommittee on National Security, Emerging Threats, and International Relations and am happy for your interest in this important area of veteran's health. I look forward to answering any questions you might have.

Mr. SHAYS. Thank you, Doctor. I am going to have the Counsel start with the questions, and I will be, probably, interrupting him.

Mr. HALLORAN. Thank you. Dr. Mather, I see you brought your lawyer. And your testimony contains a discussion of two relevant statutes. Why? Do you think they conflict?

Dr. MATHER. Well, I am not a lawyer, and I have brought a lawyer with me for just that reason. But certainly, as a person involved with implementing both the laws, there were areas that seemed inconsistent to me.

Mr. HALLORAN. Does one of those areas include or encompass the way VA would approach the use of animal data?

Dr. MATHER. No.

Mr. HALLORAN. It does not?

Dr. MATHER. But at the time when we were setting up the implementation plan for this, we had enough questions that we referred them to General Counsel. And I will let Mr. Hipolit take over from there, since he is a lawyer and I am not.

Mr. HIPOLIT. At the time those two statutes were passed, there appeared to us to be several inconsistencies in the statutes that took a somewhat different approach to the same issue. So we were somewhat confused as to, you know, how we would implement the two statutes.

We went to the Justice Department, to the Office of Legal Counsel, for advice as to how we would—you know, if one statute would supersede the other, or if we were to try to implement both, or whatever. We received an opinion from the Office of Legal Counsel indicating that both statutes—the statutes were not mutually exclusive, essentially; that we could reconcile the two, implement both statutes. And they gave us some advice as to how to reconcile some of the apparent inconsistencies.

Mr. HALLORAN. So it is not the Department's testimony, then, that the statutes, read side by side—if one uses different words to describe the role of animal data, or animal studies, in this mechanism, that you simply are allowed to choose the lesser approach to animal studies?

Mr. HIPOLIT. No, animal studies wasn't part of the——

Mr. HALLORAN. It wasn't?

Mr. HIPOLIT. That wasn't one of the things we identified as an inconsistency and asked Justice about.

Mr. HALLORAN. So it is possible that the Department's approach to animal data is violating both statutes?

Mr. HIPOLIT. No, I wouldn't say that. The animal data just wasn't an issue as far as reconciling the two statutes.

Mr. HALLORAN. Was the Programs Enhancement Act the act under which you proceeded with these three latest IOM studies?

Dr. MATHER. Well, both of the laws involve infectious diseases. In one, it used Sand Fly Fever, Leach Meniasis——

Mr. HALLORAN. Well, no, my question was——

Dr. MATHER. The other one was Malaria. So one of the studies that the IOM is going to do is infectious diseases. Both of the laws had a list of infectious diseases. One included Malaria; the other one didn't. And as a broader approach, the IOM, who is as independent as they have given the impression here today, thought

that the broader infectious diseases was a better approach than limiting it to Sand Fly Fever and Leach Meniasis.

Mr. HALLORAN. But the question was, Mr. Binns testified that the Research Advisory Committee wasn't advised about the construct of these studies, as they may have been for past studies. And so I made the assumption you were proceeding under a statute that didn't necessarily refer to or involve the Research Advisory Committee. Is that not the case?

Dr. MATHER. Well, it would be unusual for us, as we work with the IOM in both fulfilling legislative mandates and sometimes things that we feel we need that don't have a legislative mandate but could use their advice on, it is unusual for us—I can't think of an instance where we have taken that to a VA advisory committee; no matter what the subject was. So that is just not the way we do business.

Mr. HALLORAN. Right. So let's say that, because one of those studies was about ALS, in which your testimony says, "This study arose out of concerns raised by a series of recent scientific publications that suggested veterans from all eras may be at a greater risk for this disease." Can you describe those publications? How many? Are they peer-reviewed?

Dr. MATHER. They were all peer-reviewed. There is a fair amount of literature on ALS. The recent studies, though, were specifically on ALS in veterans. And the studies appear to indicate that all veterans, no matter what era, have a higher risk of ALS than do people who did not serve in the military.

This may be consistent with other non-veterans studies that show athletes have a higher rate of ALS—Lou Gehrig was an athlete—and show that pilots and people in the air industry, stewardesses—or they don't call them "stewardesses"—attendants, flight attendants, have a higher rate of ALS.

Mr. HALLORAN. So would such a finding, if the study comes back and says, "Yes, indeed, we find that there is no specific incidence or spike in ALS among Gulf war veterans, but among all veterans," that would preclude under the law, then, VA from making a presumptive conclusion or association between Gulf war service and ALS?

Dr. MATHER. I can't speak for the Secretary, but the Secretary could make a presumption for all veterans, that ALS was a risk of military service. He could.

Mr. HALLORAN. Right. Thank you.

Dr. MATHER. That would include Gulf war veterans.

Mr. HALLORAN. Were you and/or Dr. Brown involved or aware of the change in the associational standard that Mr. Binns described?

Dr. MATHER. No. Today was the first day that I had actually seen a reference to me, the two, the IOM studies, talking about Agent Orange or talking about Gulf war illnesses are the same. And in my experience, the five categories are based on occupational health ways of looking at association, and go back to one that was not congressionally mandated, but that I was involved with, with mustard gas and the experiments that took place during World War II, and the subsequent health effects.

Perhaps Dr. Brown.

Dr. BROWN. Yes, I would just add that I had never noticed that difference before. And I was thinking about it, as I saw it up there. I think my reaction to that is that, I mean, clearly, one has the word "human," and the other doesn't. But I would caution about over-interpreting what that means.

I think that, in a practical sense, the way that the Institute of Medicine reviews Agent Orange studies for us, the studies that we use for Agent Orange to establish—essentially, the same process to establish presumptive service connection for Agent Orange health effects—is exactly the same as the process that they use to evaluate the corresponding literature on Gulf war health effects.

And by that, I mean they—as Dr. Goldman and Dr. Potolicchio pointed out, they do rely primarily on epidemiological studies; but they also consider a wide range of animal studies. In essence, from a practical standpoint, they are identical.

You have heard there are over 100 animal studies, for example, that were part of the recent Sarin update, just to use that as an example of a Gulf war study. If you look at the most recent veterans and Agent Orange study, they reviewed hundreds and hundreds of animal studies along the same lines, looking at biological plausibility, using it to reinforce the epidemiological data.

And I would just add that in the history of the Agent Orange studies, the Agent Orange studies which VA uses to establish presumptive service connections for Agent Orange herbicide health effects, VA has never established a presumptive service connection based solely on animal studies. That has just never occurred. So from a practical standpoint, I think that distinction—well, it has no practical distinction.

Mr. HALLORAN. OK. Well, I don't take that as good news. Words have meaning, and the statute was passed here—well, let me go back.

So that has never been done before. Because in the normal course of events, without any Gulf War Health Act, the VA would, when it received definitive scientific evidence of a link between a cause and effect in terms of human disease and you found that cause in a veteran, you would associate it and connect it with his service and be on your way; is that correct? Individually, or as a group, that's how it works.

Dr. BROWN. Well, I am not sure about that. I can't think of too many presumptives that we have established. You could——

Mr. HALLORAN. No, not presumptives.

Dr. BROWN. You could do that——

Mr. HALLORAN. No, not presumptives. Just cause and effect. Just service connection.

Dr. BROWN. Well, let me give you an example. The publication that Dr. Mather pointed out, showing greater rates of ALS amongst not just one group of veterans, but amongst all veterans from World War II onward, that causes a great deal of alarm. It seemed like a pretty good study, a well-done study, large groups of veterans all the way up to Vietnam, Korean War, and so forth.

We decided that it was such a controversial issue and such a difficult issue that we turned to the Institute of Medicine to help us try and evaluate that overall scientific literature on ALS, on the relationship between ALS and military service. I think actually, as

I understand it from discussions from the Institute of Medicine when we were considering how to do that study, there are actually dozens of studies, a few dozens of studies, that pertain to veterans and ALS.

We think that is an important issue. Obviously, you know, we want to find out about that. And if it is a real effect, we could consider the possibility of presumptive——

Mr. HALLORAN. Let's go back to that word, though, because my point is this: that the statute was passed for a reason. Those words were written there for a reason: to make the VA do something different than it would otherwise do, in the treatment of Gulf war veterans who present themselves as ill. And so I guess my one question is, what different did you do?

I mean, it is not persuasive testimony to say that the Institute of Medicine, which has always approached the relationship between epi data and animal data in this way—that you didn't interfere with them. I mean, somebody who is already doing what you want them to do doesn't need to be interfered with.

Dr. BROWN. OK, I take your point. That is a good question.

Mr. HALLORAN. So I don't find that persuasive evidence of anything.

Dr. BROWN. That is a good question. I guess I would answer that by——

Mr. HALLORAN. What different did you do because of this statute?

Dr. BROWN. Actually, I would say we did nothing different. What we did was, we asked the Institute of Medicine to consider the entire body of scientific literature. And by "all literature," we meant all literature. We meant animal studies, we meant human studies, or any other relevant literature. When we say "all the relevant literature," that is what we meant. And I think that is what the Institute of Medicine gave us.

Dr. MATHER. And I think that you perhaps could ask the Institute of Medicine why the word "human," because we certainly didn't ask for it. As far as I am concerned, you could take it out, without a loss; or add it to the Agent Orange ones, without any great loss. So, you know, to me, it is a point without a difference. But the experts are here, so why don't we ask them?

Mr. HALLORAN. Sure. Please.

Dr. GOLDMAN. Well, let me tell you what I think that we did that was very different and, I think, relates back to the statute. And what was put up on the board was "The criteria for evidence is sufficient to conclude there is a positive association." But there was another level of evidence that is below that, that is "Evidence is limited and suggestive;" which is a level of evidence that was created by the statute because of the presumption that was built into the statute of leaning toward the veterans, in terms of finding an association.

And when you look at—and I attached it to the written testimony, which I hope will be appended to the record—when you look at the table of all the conclusions that have been developed by these committees, in fact, many of the conclusions have been in this "limited and suggestive" area.

I can't tell you how hard it was for groups of scientists to do this. This is not what scientists normally do. This is a shade of gray; where we usually try to stay away from it. We usually try to say it is either—you know, it is either probable or possible, or not. And if you look at every single expert process, other than this one, this layer doesn't exist, this particular stratum. It is here because of the law.

And I think that it is something to really look at, in terms of the oversight, in terms of what is going to be done. We weren't sure. We never tried to stray into that as a committee. We never wanted to talk about what the implications would be of our findings. We knew that we were there to talk about the science, and not the policy implications. But clearly, you know, this is a major policy issue, in terms of what is done with these conclusions about "limited and suggestive."

Mr. HALLORAN. Dr. Goldman, Dr. Potolicchio, do you find a discussion of the animal efficacy rule in terms of a parallel to this, in terms of a different approach to animal data in these decisions or discussions, do you find that parallel inapt?

Dr. GOLDMAN. No, I don't, actually. Again, I would agree with some of what was said earlier; that if one needed dosing studies, as one might need for a pharmaceutical, a vaccine, or perhaps to understand acutely what a nerve agent does to you, I wouldn't want to see those done on people. And you would want to be able to infer from animals what is going on with people.

However, in that context, you are doing something different. You are doing something different. You are finding a parallel to something that is a known response in people.

And the problem really is with not so much the sensitivity. I think animal studies can be very sensitive about finding that there is an effect. And they can be very useful in telling us the dose response. But it is specificity: Is the specific effect that you see in an animal the same effect as the effect you might see in a person? That is very difficult. And so, you know, we don't have patients who come in to Dr. Potolicchio with a chief complaint of having trouble running a maze. And, you know, that is what the challenge is in connecting the data.

Dr. POTOLICCHIO. Do you want my comment as a clinician.

Mr. HALLORAN. Sure.

Dr. POTOLICCHIO. Well, if you take the animal data, for instance, let's say there were studies that were done in monkeys with Sarin, and humans. And the interesting thing about it is that it changed a test, one test, which was an EEG; which is something I know a lot about. The changes that were induced by Sarin in the monkey and the human were about the same, but there was no real health outcome from that. It was a test result.

And so we took that information and we said, "Well, OK, this is suggestive." I mean, not sufficient, but suggestive of something going on. In the same way that in an animal you may measure some receptor that changes a subtype because you expose it to some Sarin for a certain period of time. But what does that mean in regards to the human? Probably, nothing at all; until you do the same kind of exposure and see whether it changes the same thing. But it is a hard thing to do.

But there is no clinical outcome. There was no behavioral outcome, either, in the rat. There was none at all. And so therefore, you have some change that occurs in the brain that has no meaning, really. I mean, it is science, and you need to go forward with that.

But if it were like, say, the dopamine receptor in the brain that has a lot more to do with Parkinson's Disease, and then we found that Parkinson's Disease had a higher level among veterans, that is where you get into plausibility and cause. And we don't have that.

Mr. HALLORAN. So in terms of what you are saying, what kind of animal—I am assuming and hoping there won't be human epi data about Sarin exposure any time soon that we can look to——

Dr. POTOLICCHIO. There is, but——

Mr. HALLORAN. There is, I know, but I just don't want any more.

Dr. POTOLICCHIO. Fair enough.

Mr. HALLORAN. What kind of animal data would you look for to push plausibility into likely association; a study result that would show what? Fill in the gap that you see in terms of animal data.

Dr. POTOLICCHIO. Well, if you look at that receptor type, I mean, you would expect some changes in cognition, maybe an increased incidence of Alzheimer's Disease or something like that. I mean, it would have to have some clinical implication.

Mr. HALLORAN. OK. Dr. Mather, on page 7 of your testimony, you say, "VA's task in reviewing these reports is merely to decide whether additional presumptions of service connection are warranted by current scientific evidence." We heard before there aren't any now, though. Is that word "additional" correct?

Dr. MATHER. Well, I mean, the studies are still underway. There were 33 categories of exposures that need to be looked at. We are in the process of looking at them. There may well be additional presumptions during that——

Mr. HALLORAN. But additional to what? Are there presumptions now?

Dr. MATHER. Well, I was just thinking of the entire general. We have some presumptions: the presumptions for Agent Orange, the presumptions for Mustard Gas, the presumptions for MS and Leprosy, are the ones immediately come to mind.

Mr. HALLORAN. Thank you.

Mr. SHAYS. I have a few questions that I want to ask. I listened to what the Counsel was asking in the beginning about the two statutes. And I found myself thinking, you know, "There we go again." It is very difficult for someone without a scientific background or a health background to sort out a lot of these questions. So I don't need you all to make it more difficult.

And for you to come in and talk about two statutes as if it is relevant to the hearing—because I was left with the impression, well, the statute requires that you need to use animal data. And then you come in and say, but there is another statute that you thought was in conflict. And then the counsel basically says it is not in conflict. And I am thinking, "Well, you are talking about animal data;" and that somehow, in one statute you had to use animal data, and in another one you didn't. And then we find out when we ask you the question that the conflicts don't even relate to animal data.

So I am wondering, why the hell do you even bring it up? Why is it even an issue at this hearing? So someone tell me why.

Mr. HIPOLIT. I believe that was included in the statement by way of background. I think that portion of the statement reviewed VA's statutory obligations, in general, in this area.

Mr. SHAYS. So the bottom line is it is totally irrelevant, though, to the issue at hand, as it relates to animal data. Correct?

Mr. HIPOLIT. As far as if we are talking about whether we should use animal data to create presumptions, it is not really helpful, I think.

Mr. SHAYS. It is totally irrelevant, and not helpful. That is the bottom line.

You know, you all may be right in the end about this. I mean, Dr. Goldman maybe what you say is something I have to pay more attention to. But I have to clear my mind of this whole thing about the statutes, because they are not in conflict. They aren't in conflict as it relates to animal data. They both make reference to animal data.

And so, now, Dr. Goldman, I believe that we said animal data has to be considered. That is what I believe. And I believe your statement is saying, "We considered it, but—but—but—but—but—but—but—" So I am led to believe that you really didn't consider it, because you think animal data isn't relevant. So, "Screw Congress, forget the law, we have decided in our scientific way it is not relevant." That is kind of the way—I am giving you the short, more concise version of what is in my head right now. So given what I just say, please respond.

Dr. GOLDMAN. That certainly is not what I intended to communicate in my testimony.

Mr. SHAYS. You have to turn on your mic. Start over again, please.

Dr. GOLDMAN. It is certainly not what I intended to communicate in my testimony. We certainly did take the language in the statute seriously. As scientists, we feebly tried to read it ourselves. We didn't feel that it was—that the statutes were contradictory.

We did review the animal data. We reported on it. We referenced them. And we in no way wanted to do anything except honor the intent of Congress and do the best job that we could as scientists.

We had on our committees toxicologists who specialize in both generating and analyzing that kind of data; are not involved with epidemiology, clinical medicine or science at all. And we were very respectful of their views; involved them in looking at every single chemical. So it is not what I meant to convey at all, and I hope that you can hear that.

Mr. SHAYS. Let me ask you, I understand that if we are going to introduce a new drug into the marketplace, we don't want to have any mistakes. It has to be as perfect as we can make it. Is it your view that in order to make a presumption of a service-connected disability illness, that we need to rise to that same test?

Dr. GOLDMAN. I think it is up to Congress to decide what the test should be. I think that, actually, the language in the statutes is very different than the language that one uses as a standard for introduction of a new drug.

When FDA reviews a new drug, it is doing kind of a risk/benefit determination. There are risks of drugs, but there are benefits; and FDA tries to decide on the side of the patients that the benefits outweigh the risks.

I don't think that is how the legislation was written. It is not how we read the charge that came from that legislation. We felt that the presumption should be slanted toward the veterans, in terms of making sure that the veterans' health is adequately protected; which is why there is a category of "limited and suggestive" health effects, and why we took that part of it very seriously. So I think it is different.

I think it is also different, by the way, for introduction of the chemical exposures in this society. If one were to think about to what chemicals would it be acceptable for soldiers in combat to be exposed in the future, that would be a very different kind of review that might well rely almost completely on animal toxicology. Because there, you are not trying to look at a specific diagnosis, a clinical diagnosis. You are looking at risk. And I think for risk assessment you can solely rely on animal data. You don't need human epidemiology studies for risk assessment.

And I have done a lot of risk assessment, myself, during the time I served at EPA, and I am very comfortable with the use of animal data to determine risk. So I just think these are——

Mr. SHAYS. Then tell me why I should feel confidence that you used animal data?

Dr. GOLDMAN. Well, I think, first and foremost, that the reports stand on their own, in terms of citing the data, discussing the data, including the data in the discussions of the substances and the relationships to disease. And so, you know, we could step through them. And there are literally hundreds, if not thousands, of studies reviewed in those reports.

You can also look at the composition, the members of the committee. We could point to those who are toxicologists, who were there to provide that expertise.

Mr. SHAYS. OK.

Dr. GOLDMAN. No one member of any committee like this is an expert in all of the science that this kind of a group looks at. But we did have experts in the science of toxicology who were there to provide that.

Mr. SHAYS. Well, you know, I have become inherently suspicious, without the background to back up my suspicion. And if you had been in my place for 14 years, you would be more suspicious than I am. And I become suspicious when I see a red herring like two pieces of legislation coming before me—totally irrelevant.

And I become suspicious because we all know that 25 percent, give or take, of our veterans are sick. And they aren't getting any help. They are getting no help. They are getting no help.

And so, I am struck by the fact, and I am going to have to say to you, your testimony is going to be—I mean no real disrespect, Dr. Mather, but we have had too many disagreements for me to feel comfortable with this side of the equation.

Your testimony is going to stand as saying to us, in total confidence, that the first panel was totally wrong. Their statement was that animal studies were not considered; were not evaluated; they

were ignored. And you are saying, "Not so." That is what your testimony is saying to us.

And if you want to carry that burden, I hope it is with total confidence; because I don't know you, but I am going to have to go with that. And that is the way.

And if you have any bit of concern that maybe you didn't look at animal studies the way Congress intended, this is your chance to tell us. If you think you could have done a better job, this is your chance to tell us. Otherwise, it is going to be your statement. It is on your shoulders. And everything rests on what you say. That is why I am going to conclude this. That is where I am coming from.

So if you want to be a little more precise, fine. If you want to have your testimony stand the way it is, that is the way it is going to stand.

Dr. GOLDMAN. Let me tell you how I think this connects together, and it might be helpful. I mean, first and foremost, can I sit here and say that I believe that I am an expert on what the intent of Congress was in these bills and that I know what all those intentions were? No, I can't say that. I cannot say that.

Mr. SHAYS. OK, but let's stop there——

Dr. GOLDMAN. I am not an attorney and——

Mr. SHAYS. No, let's stop there, though.

Dr. GOLDMAN. I cannot say that.

Mr. SHAYS. No, OK. That is not really what I am asking.

Dr. GOLDMAN. OK. I just want to make that clear.

Mr. SHAYS. Because what I am saying to you is, it was the intent—no one disagrees with it—that animal studies would have a huge weight. Because we know there is no other way to look at it. We don't believe that it is possible to provide any help to veterans if we don't look at animal studies, because there aren't any other real important studies of any consequence over a long period of time to rely on—given that we don't know the intensity of the exposures to our veterans.

So we don't think you are going to experiment with human beings on exposures. So if you can't experiment on human beings, and you can on animals, animals are our only way, in my judgment, of coming to some conclusion.

Dr. GOLDMAN. I think that our committees may have been, from that dilemma, salvaged from that by the fact that the substances to which we were directed for our studies—without an exception that I can think of—have had extensive amounts of human epidemiological evidence to review; I mean, so much so that our committees were nearly overwhelmed by the amount of work that was required in order to go through even the human studies. We weren't looking at——

Mr. SHAYS. Let me ask you something. Let's just take depleted uranium. Tell me the studies that you looked at of depleted uranium.

Dr. GOLDMAN. I did not serve on that committee, so I am going to have to defer that one to somebody else. I am not familiar with that report.

Mr. SHAYS. So you can only speak to it as it relates to certain issues related to what?

Dr. GOLDMAN. The three reports that I have been involved with.

Mr. SHAYS. Refresh me again?

Dr. GOLDMAN. Yes. Let me make sure I am referring to them properly. The fuels, combustion products, and propellants report; and the insecticide and solvents report. And then, I am currently chairing the review of the medical literature report.

Mr. SHAYS. So insecticides, we have a lot of studies from the workplace.

Dr. GOLDMAN. Yes. And that was true for solvents, as well. There were many studies.

Mr. SHAYS. And how about Sarin?

Dr. GOLDMAN. Sarin?

Mr. SHAYS. How many studies?

Dr. POTOLICCHIO. How many studies were actually reviewed?

Mr. SHAYS. Yes.

Dr. POTOLICCHIO. I don't know the exact number. But I can tell you that in the first committee, there was a large body of toxicology studies with Sarin that were looked at, in depth. And as a matter of fact, there was a fairly long——

Mr. SHAYS. Mixing——

Dr. POTOLICCHIO. We are talking about the first——

Mr. SHAYS. Mixing Pyridostigmine Bromide in with it?

Dr. POTOLICCHIO. Exactly, and Sarin.

Mr. SHAYS. Well, how? How would you do it with humans? Did we experiment with humans?

Dr. POTOLICCHIO. Well, the only experiments that you had in humans came from the Edgewood studies.

Mr. SHAYS. No, I am talking just humans, though. I am not talking animals.

Dr. POTOLICCHIO. Edgewood was the only studies that you actually had measured exposure.

Mr. SHAYS. That is the only study?

Dr. POTOLICCHIO. In humans.

Mr. SHAYS. OK. And with depleted uranium, can you speak to that?

Dr. POTOLICCHIO. Depleted uranium, there were quite a lot of studies that were evaluated there; but it was mainly in the miners, and so forth.

Mr. SHAYS. With depleted uranium?

Dr. POTOLICCHIO. The uranium miners were looked at, particularly.

Mr. SHAYS. OK. All right.

Dr. POTOLICCHIO. They had to look at uranium in general before they made comments about depleted uranium.

Mr. SHAYS. Yes, but that is a different substance. Depleted uranium is different. Uranium is the same. Depleted uranium is a hardened metal, correct, that was almost vaporized when they were hitting tanks. And when our soldiers went into these tanks, they breathed these hardened metal substances that were in extraordinarily fine pieces, correct?

Dr. POTOLICCHIO. That is correct.

Mr. SHAYS. And we have a study of that kind of circumstance?

Dr. POTOLICCHIO. Well, they looked at the soldiers who, you know, had depleted uranium fragments in their body. And those studies are still ongoing, as I understand.

Mr. SHAYS. No, I understand that. What I am trying to talk about is, there is no study that we can—we can't go to a mine and talk about depleted uranium. It is radiological, it is radioactive in that sense; but it is not the same substance, correct?

Dr. POTOLICCHIO. It is not the pure substance. But they did look at uranium miners, because they broadened it to encompass the whole thing.

Mr. SHAYS. And they looked at the mixture of Sarin with PB? Where would they have found that?

Dr. POTOLICCHIO. No, there is no study that looks at the mixture.

Mr. SHAYS. See, that is my point. How do you duplicate that, where you mix the two? We absolutely know for a fact—that when the alarms went off, the soldiers and others who were in the field panicked. They took out their PB and took—if they were supposed to take one, they took four. And they thought, "My God, if four protects me, I'll take eight." You know, there is no study to duplicate that.

Dr. POTOLICCHIO. No, there is no study.

Mr. SHAYS. Yes. So if there is no study, I wonder how we are able to help those veterans, if we are not able to do animal studies. And so, you had witnesses before you. Speak to Dr. Henderson's research, if you could.

Dr. POTOLICCHIO. Well, her research has to do with the, you know, subtype of receptor in the brain that changes after exposure to low-dose Sarin.

Mr. SHAYS. Combined with——

Dr. POTOLICCHIO. Combined with——

Mr. SHAYS. PB.

Dr. POTOLICCHIO. With PB.

Mr. SHAYS. Right.

Dr. POTOLICCHIO. No, well, I am not so sure she did that. Abou-Donia did that; not Henderson.

Mr. SHAYS. OK. I think she mentioned that. See, I just don't know how we find that kind of experience, that data, in terms of our looking at humans. I think we only find it with animals.

So in those studies, I am inferring from you, Dr. Goldman, that when she talks about those studies, in spite of the fact that she saw distortions, it wasn't the kind of distortions that would lead a committee to say there was a problem?

Dr. POTOLICCHIO. But you have to look——

Mr. SHAYS. I am asking you, Dr. Goldman.

Dr. POTOLICCHIO. Oh, I'm sorry.

Dr. GOLDMAN. Well, in this, I would just have to be expressing my personal opinion, because I was not on the Sarin committee.

Mr. SHAYS. Right. I understand that.

Dr. GOLDMAN. But my personal opinion about those studies is that they are exceedingly valuable, in terms of providing, if you may, kind of a biological marker that with these low doses there is something going on in the brain. And they are also highly innovative, because she is using low doses; and most animal studies don't do that.

And I think that kind of research is heading in a direction where in future we are going to see animal studies that are going to be much more useful to us. You know, I said in my oral testimony

that a lot of the animal studies are done at such high doses that it is hard to interpret them. But when I read her study—which, again, I was very impressed by—I don't think I would have been able to draw from it a disease outcome, a health outcome, in people from it.

Even though it would make me extraordinarily concerned about the possibility of chronic effects from low-level exposures, I couldn't tell you what a patient with those effects might look like, on the basis of changes in receptors in certain parts of the brain and these other subtle findings.

And if I had been on the committee, I think where I would have come down with that is, you know, one, wanting to see a lot more research on Sarin and, two, wanting to see a lot of effort made to make sure that in the future, where we have soldiers who might be exposed to Sarin, that we are out there monitoring it. I would love to see sniffers of some kind, or badges, or real-time monitors out there.

Mr. SHAYS. You know, you are being the perfect scientist, and I respect it.

Dr. GOLDMAN. Not perfect. Not at all perfect.

Mr. SHAYS. Well, no, but you are in a way. You would say——

Dr. GOLDMAN. No.

Mr. SHAYS. No, hear me out a second. You want to see a lot more studies.

Dr. GOLDMAN. No, not a lot——

Mr. SHAYS. No, no, that is what you did say.

Dr. GOLDMAN. But I don't think a lot——

Mr. SHAYS. No, no, hold on. I am going to say it, and then you can respond.

Dr. GOLDMAN. Yes.

Mr. SHAYS. I have given you an opportunity to respond.

Dr. GOLDMAN. OK.

Mr. SHAYS. I am going to say to you that I have heard that for 15 years.

Dr. GOLDMAN. Yes.

Mr. SHAYS. Fourteen years. And so the veterans are right: By the time we are going to be able to help them, they will all be dead. They will all be too old. That is the bottom line. Because you are being that scientist that we want you to be in one respect.

We wanted, though, to bring it down a notch. We wanted to give a lot more weight to animal studies. You know, the worst thing that could be is, you might be wrong; and so you help some veterans who are sick. What a terrible thing to have done. In the end, that is what we would have asked you all to do.

But I feel like the level is just set a little too high. That is kind of what I am struck with.

Dr. GOLDMAN. Well, let me try a response. And, you know, here are some possible ways that this could be approached. And one is to say, OK, the fact that there are these changes, these brain changes, in animals, but we don't know what the disease is—but we could maybe presume that it might be neurological. And this is a question, I think, that is back to Congress. Then would you say every neurological disease might then be somehow linked?

I mean, as a scientist, I can't tell you what the diseases are. But that is something that would be a potential, and maybe not an irrational, response.

Another possible response is to say, "Could you somehow infer which veterans were more likely exposed to Sarin gas?" and presumptively say, well, on that basis—we don't know what it might have done to them, but on that basis, say that they deserve to have some kind of compensation? Again, that is a different question than saying, can I tell you what disease is caused.

Mr. SHAYS. No——

Dr. GOLDMAN. And you might be right that we have been approaching this with a scientific rigor, because we have thought that the question was a specific clinical condition connecting it to a specific exposure. That is really hard to do with those kinds of data. But there are other kinds of inferences that could be made. There are other ways to approach it.

Mr. SHAYS. What triggers me is when I hear that your immune system in animals is impacted. I mean, that is the kind of veterans we kept seeing. Weird things happen to them, weird things: rashes that were just unexplainable. But you could see it. They were really in bad shape. And then we have doctors, who I respected, say, "You know, when you take certain chemicals, you impact your immune system in your brain, and tragic things can happen as a result."

Now, I want to be real clear here. I am going to invite Mr. Binns to just respond, but not in any way about who holds responsibility. I am just going to ask him to respond to the fact—Mr. Binns, if you are hearing me—to the fact that we had one whole panel that said one thing, and we have another panel who said another.

I would like you to come up, please. If you would, just pull a chair on the side of the table.

Your view is a view I share, so you are not alone; even though you may feel alone with this panel—that the animal studies carried very little weight. I am not interested in who holds responsibility, or any part of that dialog. So you may react to this panel.

And then I am going to close by having you all just ask if there is any question we should have asked, any comments you want to make.

Yes, sir.

Mr. BINNS. I think it is actually quite simple to reconcile the comments that have been made. No one has suggested that the IOM committees have not read a lot of animal studies, written a lot about animal studies, and presumably in their deliberations discussed animal studies. But the conclusions—which are the only thing that matters, under the law, for the determination of benefits—have all been expressed within the framework of the categories of evidence.

Dr. Goldman suggested that the categories of evidence were reconsidered by each IOM panel. But—correct me if I am wrong—have any panels changed the categories of evidence to include animal studies?

Mr. SHAYS. Unless there is a "Yes," I am going to assume the answer is "No."

Dr. GOLDMAN. The answer to the first part is "Yes." And I just don't know about the answer to the second part of your question. I don't know.

Mr. SHAYS. So the answer is that the criteria has changed; you just don't know where the criteria has changed. And the committee will look at it, so it is a valid point to bring up.

Mr. BINNS. OK.

Mr. SHAYS. I mean, Dr. Goldman, am I expressing your view? Right.

Mr. BINNS. The copy of the categories of evidence I have from the first Gulf war report—and I do not have them from all of the reports. But for example, the "limited, suggestive evidence of association" which was referred to, it again is limited to exposure to a specific agent and a health outcome in humans.

So it is not enough to say, "We have contemplated animal studies," if at the end of the day the boxes that you have choices of checking are boxes which are defined in terms that exclude animal studies.

Mr. SHAYS. Thank you. Is there any other point, before I get on?

Mr. BINNS. I would add one more point, and that is the reference to the effects in animals; that you couldn't know what these effects would be. I think Dr. Henderson testified to the fact that there were cognitive effects. So it is not entirely true to say that there are no judgments that can be made based on this evidence.

And in fact, I think the doctor used the word "suggestive" in discussing what he felt were the conclusions that could be drawn from Dr. Henderson's studies, and I would add, studies by the Chemical Defense Institute of the Army and others who have also found low-level effects of Sarin.

"Suggestive" is the term that Dr. Goldman pointed out does meet what category three is supposed to be: "Limited suggestive evidence of an association." So by their own terms, I would find that standard has been satisfied.

Mr. SHAYS. Well, this is a work in process. But I don't think we can afford to have this issue just keep going on and going on and going on.

I am going to invite all of you to just make any comment you make, or choose not to; or ask any question you choose to ask, and answer. Dr. Mather.

Dr. MATHER. Well, I really only want to apologize to you for confusing you with the stuff about the legislation, the two pieces of legislation. I certainly didn't mean to confuse anybody. But I am here representing, as you well know, the Department of Veterans Affairs, and people who know more than I do, perhaps, felt that was an important piece of background. But I apologize. I could have fought to keep it out.

I also want to apologize and take responsibility for the fact that the Gulf War Veterans' Health Initiative has not been revised. It is on the list to be revised, and we recognize that it is out of date. And we certainly are working on a revision. But it simply hasn't been finished.

Mr. SHAYS. Thank you for saying that. Dr. Brown.

Dr. BROWN. Thank you, Congressman. I want to thank you for inviting us here. I do appreciate the fact that you are persisting to

push this issue. It is an obvious and an ongoing issue. It is very frustrating.

And I guess, on a personal note, I would just add that, for me, to hear somebody like Mike Woods, who I have known for some time—to hear him talk about the problems he has had getting treatment and recognition of his illnesses from VA, really, it just breaks my heart. I am sorry. I am just so sorry to hear that.

Mr. SHAYS. Well, I would like you to followup——

Dr. BROWN. I think that I might—on a personal note, I think that I am going to—I mean, he is one veteran, but every veteran is an important veteran. I am going to talk to him.

Mr. SHAYS. Well, thank you for saying it. But he testified that he was given a placebo.

Dr. BROWN. I can't explain that. I don't think that VA doctors would do that, but I will look into that.

Mr. SHAYS. Thank you. Dr. Brown, I am going to ask you to look into it, and ask you to report back to me.

Dr. BROWN. Thank you, Congressman. I will. He also talked about having problems with getting a registry exam, and not being asked questions about his exposure; which is something that also concerns me, since it is also a program that my office is involved with. So, yes, I will make that commitment, sir. Thank you.

Mr. SHAYS. And we appreciate your counsel being here. I realize, given the issue, you were here to respond to that issue. And I thank you for your honesty in response to my questions. So, thank you.

Mr. HIPOLIT. Thank you, Mr. Chairman.

Mr. SHAYS. Dr. Goldman.

Dr. GOLDMAN. Yes. I want to thank you for holding this hearing; and for your concern about the health and welfare of the veterans; and to say certainly I am available if there are further questions or discussions you want to have. I am sure that is true for the other scientists who served on these committees. And just to give you my assurance that, from what I can tell, that they are all committed to trying to do this job in the way that Congress has intended it to be done.

And if we are not doing that, then we need to hear that. We need that feedback; and we need to be corrected, so that we are providing the kind of scientific information that you need in order to do your job. So thank you very much.

Mr. SHAYS. Thank you, Dr. Goldman. Dr. Potolicchio.

Dr. POTOLICCHIO. Well, I would like to thank you for inviting me, also. And I am sure you are on top of this.

Mr. SHAYS. Well, we aren't. That is the sad thing. We are trying to be.

We didn't ask you to make any comments, so, you know, probably, you will have the greatest wisdom of the whole group right now.

Ms. STOIBER. Absolutely not. But I do want to say that the Institute takes very seriously the privilege that we have been offered of doing this important work on behalf of veterans. The scientists who serve on our committees all serve pro bono, and they give thousands of hours of work for every committee. And so they do it as a matter of national interest and personal commitment to get

the best possible and most accurate scientific outcome in every analysis.

And so we listen to what you are saying, and we certainly will make every effort to assure that issues that you have raised are considered in any work that unfolds from this day forward.

Mr. SHAYS. Thank you. You know, we give the benefit of the doubt, when bringing out a drug, to making sure we don't bring it out unless we are very certain that it is safe. It seems to me, we should be giving the benefit of the doubt to the veteran, in terms of the analysis that we make.

Ms. STOIBER. If you could sit in on our committee meetings—which you can't, because they are all conducted in private, except for public sessions—you would hear the committee members really searching very hard on every shred of evidence to try to figure out if there are alternate interpretations; and if so, how to do so in a way that is in the interests of the veterans community. So we will do that conscientiously; but we already take it as a very important component of what we do.

Mr. SHAYS. Thank you. Mr. Binns, we appreciate your staying through and listening to the whole—let me first say, I appreciate the government folks coming second. It gives me a feeling that you have more credibility, having heard what was said in the first panel. So I thank all of you for that.

And I thank those on the first panel for staying and listening to what the second panel had to say.

Do you have some nice closing comments you would like to make?

Mr. BINNS. I wish I did. I think the people who met me 3½ years ago know that I am a person who likes to assume the best and work with people; and we have tried that for 3½ years.

I also sat in on the first session of Dr. Goldman's new committee. As Dr. Stoiber was saying, you can't sit in on the detailed discussions. The speakers selected by the staff to participate in that session—which is the only session at which outside speakers were permitted—were not a balanced presentation of Gulf war illnesses work.

And it makes it very difficult for me to believe that the people who have organized these programs—and I distinctly want to distinguish that from the scientists who have participated in them. And I respect that they do this out of their dedication to the country and out of their scientific dedication, and I do not wish to in any way impugn any of their service.

But they have been presented with a stacked program here, from the categories of evidence to, most recently, what was told them by the people selected to speak to them.

Mr. SHAYS. Well, let me ask you, it is staffed by whom? It is staffed by not the Department of Veterans Affairs; is it?

Ms. STOIBER. No. Our committees are staffed by professional staff of the IOM; many of them, sitting here with me today.

Mr. SHAYS. Right.

Ms. STOIBER. And they work under the direction of the committee. I think we organize information, but every single IOM committee has a great deal of independence to, in fact, approach the study and the agenda in any way they deem most appropriate.

Mr. SHAYS. Let me just say, I wanted everybody to be honest with their feelings; so I appreciate Mr. Binns. I wanted him to say something positive, but he said what he needed to say.

I would hope, though, that in the course of a presentation, that you are pretty comfortable that you are having a presentation that expresses what, for instance, this committee would have heard time and again. So I will make that point to you, and have confidence that you have confidence in the people who are doing this work.

Let me say, I thank all of you for coming. And I thank you for your honest answers to my questions. You have tried to help us sort this out, and it is very appreciated.

And I will just end with you, Mr. Binns, for your service in what I know has become very frustrating for you. And since I have experienced this, as well, and since I know how you feel, I particularly thank you for your service.

With that, this committee is adjourned.

[Whereupon, at 4:10 p.m., the subcommittee was adjourned.]

[Additional information submitted for the hearing record follows:]

I am a 1990-1991 Gulf War veteran. I took the pre nerve agent tablets and had at least one of the experimental anthrax vaccines. I served with Special Operations Command Central (SOCCCENT) in the vicinity of King Fahd Air Base in Saudi Arabia from August 1990 to March 1991. Immediately after taking the pre nerve agent tablets as directed I had very painful headaches, fatigue, and concentration difficulties. I was prescribed a few medications to include Midrin at this time which is documented in my medical records. The headaches and concentration loss continued for over a year afterwards. I periodically have recurrences of these headaches and concentration lapses. I believe the pre nerve agent tablets are responsible for my periodic headaches, fatigue, and concentration loss.

[redacted]

Thank you,

Jim Blackwood

BRANCH OF MILITARY DURING THE PERSIAN GULF WAR--ARMY/ARMY RESERVE
DATES SERVED DURING THE PERSIAN GULF WAR--DECEMBER 6, 1990-MARCH 26, 1991

I SERVED AS AN ARMY CHAPLAIN DURING DESERT STORM. I WAS MAINLY STATIONED AT LANDSTUHL ARMY HOSPITAL IN GERMANY. I FREQUENTLY FLEW IN AND OUT OF THE WAR ZONE AREAS, INCLUDING IRAQ AND I WAS IN KUWAIT ON THE DAY THE GROUND WAR BEGAN. THE FLIGHTS I PARTICIPATED IN WERE MAINLY MEDICAL AIR-EVACUATION MISSIONS. SINCE I WAS ENTERING AND LEAVING THE WAR ZONE IN DIFFERENT AREAS, AT DIFFERENT TIMES, AND WITH DIFFERENT FLIGHT CREWS, ETC, I REALLY DON'T KNOW WHAT POTENTIAL TOXINS I MAY HAVE BEEN EXPOSED TO. I DON'T KNOW HOW TO FIND OUT THIS INFORMATION. ALSO, ALTHOUGH I WAS NOT INITIALLY AWARE OF IT, MOSTLY DUE TO MANY OF MY DESERT STORM EXPERIENCES, I HAVE POST-TRAUMATIC STRESS DISORDER. I HAD SUPRESSED THOSE MEMORIES FOR SO LONG THAT I FIND IT VERY, VERY DIFFICULT TO RECALL SOME OF THE SPECIFIC SITUATIONS/PLACES/DETAILS. I FIND IT VERY DIFFICULT TO EVEN THINK ABOUT DELVING BACK INTO THESE SUPPRESSED MEMORIES. SO, EVEN THOUGH I HIGHLY SUSPECT THAT I WAS EXPOSED TO SPECIFIC TOXINS AND SITUATIONS THAT WERE PRESENT DURING THE PERSIAN GULF WAR, I DON'T KNOW HOW TO FIND OUT MORE CONCLUSIVE INFORMATION AND I DON'T KNOW WHAT RESOURCES ARE AVAILABLE TO HELP ME.

I WAS DIAGNOSED WITH MULTIPLE SCLEROSIS IN 1988, BUT I HAD ONLY VERY SUBTLE NEUROLOGICAL CHANGES AND MY HEALTH WAS STABLE WITH THE MULTIPLE SCLEROSIS IN AN INACTIVE /DORMANT STATE. I NEVER NEEDED TO SEEK ANY CARE DURING THAT MILITARY DEPLOYMENT BECAUSE OF THE MILD SYMPTOMS AND INACTIVITY OF THE MULTIPLE SCLEROSIS. AFTER DESERT STORM I WAS ABLE TO CONTINUE AS BEFORE PHYSICALLY, BUT MY EXPERIENCES IN DEPLOYMENTS AND VERY PARTICULARLY DURING DESERT STORM, CAUSED PTSD. I WAS ABLE TO SUPPRESS THESE SYMPTOMS FOR A WHILE BUT MY PSYCHOLOGICAL STATE WAS ALSO TAKING A TOLL ON MY PHYSICAL STATE. EVENTUALLY, AS MORE TIME PASSED, I WAS NO LONGER ABLE TO MAINTAIN MY PSYCHOLOGICAL STABILITY AND EVENTUALLY RECOGNIZED MY PTSD SYMPTOMS AND SOUGHT HELP AND TREATMENT FOR PTSD. ALSO, I AM SUSPECTING THAT SOME OF THE POTENTIAL

TOXINS THAT I MAY HAVE BEEN EXPOSED TO WERE ALSO AFFECTING AND ACTIVATING THE STATUS OF THE MULTIPLE SCLEROSIS WHICH CHANGED FROM A DORMANT STATE TO BECOMING INCREASINGLY MORE ACTIVE AND NOTICEABLE AND BY 2000, THE MULTIPLE SCLEROSIS WAS DRAMATICALLY INCREASING IN SYMPTOMS AND SEVERITY. I HAVE NEVER GONE BACK TO THAT INACTIVE STATE FOR MULTIPLE SCLEROSIS AND INSTEAD HAVE CONTINUED TO EXPERIENCE AN EVEN GREATER DEGREE OF SEVERITY OF SYMPTOMS AND PROGRESSION OF THE MULTIPLE SCLEROSIS. THE PTSD ANDMULTIPLE SCLEROSIS ARE CONSTANT BATTLES FOR ME AND THE PTSD GREATLY AFFECT! S AND CONSTANTLY AGGREVATES MY MULTIPLE SCLEROSIS SYMPTOMS AND ALSO THE MULTIPLE SCLEROSIS AFFECTS AND AGGREVATES THE PTSD.

I APPLIED TO THE VA FOR SERVICE CONNECTION DISABILITY FOR THE MULTIPLE SCLEROSIS AND WAS DENIED. I PROVIDED A NOTICE OF DISAGREEMENT TO THE VA AND HAVE APPEALED THE DENIAL DECISION.I HAVE THE NORTHWEST CHAPTER OF THE PARALYZED VETERANS OF AMERICA AS MY ADVOCATE. THAT APPEAL FOR MULTIPLE SCLEROSIS SERVICE CNNECTION HAS BEEN IN PROCESS FOR APPROXIMATELY TWO YEARS AND I AM STILL WAITING FOR THE RESULTS OF THAT APPEAL DECISION FROM THE VA. I APPLIED FOR PTSD SERVICE CONNECTION DISABILITY AND WAS GRANTED 30% PTSD SERVICE CONNECTED DISABILITY.

I WOULD LIKE TO FIND OUT WHAT I NEED TO DO/CAN DO TO GET FURTHER INFORMATION REGARDING MY TIME/EXPOSURE IN DESERT STORM EXPOSURE AREAS. I AM WAITING FOR THE MULTIPLE SCLEROSIS SERVICE CONNECTED APPEAL DECISION THAT I FEEL NEEDS TO BE REACHING A RESOLUTION IN A TIMELY MANNER. I HOPE THAT PROVIDING THIS TESTIMONY WILL NOT HAVE A NEGATIVE EFFECT ON THAT APPEAL DECISION. I ALSO NEED TO ESTABLISH THE CONNECTION OF THE CHANGE FROM INACTIVE MULTIPLE SCLEROSIS TO SIGNIFICANTLY PROGRESSIVE MULTIPLE SCLEROSIS AND MY DESERT STORM EXPOSURE EXPERIENCES. ALSO, ANOTHER IMPORTANT ISSUE IS ESTABLISHING THE SIGNIFICANT CONNECTION BETWEEN MY SERVICE CONNECTED PTSD AND THE AGGREVATION OF THE MULTIPLE SCLEROSIS DISEASE PROCESS AND SYMPTOMS. ALSO, IT HAS BEEN DIFFICULT AT BEST TO TRY TO OBTAIN/ACCESS INFORMATION REGARDING DESERT STORM RELATED DISEASES. THE SOURCE THAT HAS PRODUCED THE MOST INFORMATION&! nbsp;IS SEEING A NEWSPAPER ARTICLE BY HAPPENSTANCE WHICH IS HOW I LEARNED THAT I COULD SUBMIT THIS TESTIMONY. I HAVE NOT BEEN MADE AWARE OF ANY SPECIFIC MEANS OF GATHERING INFORMATION. WITH ALL THAT I AM DEALING WITH DUE TO LIFE ALTERING CHANGES DUE TO MULTIPLE SCLEROSIS AND PTSD, IT IS DIFFICULT TO STAY FOCUSED ON INFORMATION GATHERING REGARDING THESE TOPICS RELATED TO DESERT STORM. PLUS DUE TO EXTREME FATIGUE

AND PROGRESSING DISABILITY DUE TO MULTIPLE SCLEROSIS IT IS DIFFICULT TO EXPEND THE NECESSARY ENERGY. IN FACT, MY WIFE HAS NEEDED TO HELP ME TO ACCOMPLISH THIS TASK OF GIVING MY TESTIMONY FOR THIS HEARING. MY PTSD SYMPTOMS ALSO DETER RESEARCHING AND FOLLOWING UP ON MY DESERT STORM EXPERIENCES/EXPOSURE BECAUSE
THE MEMORIES/FLASHBACKS/NIGHTMARES/ETC/ETC COME TOO CLOSE TO THE SURFACE/ OCCUR TOO FREQUENTLY AND MAKE ME WANT TO PULL BACK FROM THE PURSUIT OF NEEDED INFORMATION.

THIS COMPLETES THE TESTIMONY THAT I AM ABLE TO PROVIDE FOR THE SHAY COMMITTEE HEARING. PLEASE EXCUSE
ANY POTENTIAL TYPOGRAPHICAL ERRORS. PLEASE CONTACT ME IF YOU NEED FURTHER INFORMATION OR IF YOU HAVE INPUT INTO MY QUESTIONS/NEEDS.

THANK YOU FOR YOUR EFFORTS TO ASSIST VETERANS!

CRAIG S. BOLLINGER

From: Marilee Lahn [redacted]
Sent: Thursday, November 10, 2005 9:54 AM
To: [redacted]
Subject: VA Funding

This is is response to an article in the PI re: VA funding for Gulf Warl Vets with resulting illnesses. My son in law Sean served in Kuwait for 1 year and was part of the ground troops that were exposed tp burning oil wells, and demolished chemical and munition caches as well as the drugs that
the government gave the troops to "protect" them from unknown illnesses. Five years after his return he began to experience unusual symptoms that were eventually diagnosed as ALS (Lou Gherig's disease - a fatal, degenerative disease) and has been under the VA's medical care since then. The VA has done a tremendous job of caring for Sean and has supplied him with most of the things that are making his life as comfortable as possible at this time. He was given a predicted 3 - 5 years to live and has survived past that mark. He is currently paralyzed from the neck down and requires 24 hr care for which the VA provides caregivers for 20 hrs/week. The rest of the - MOST of the time - Sean is cared for by his family, primarily his wife. (my daughter). This is NOT the time to be cutting ANY VA money. With the first Gulf War vets continuing to exhibit medical and other needs and an unknown number of needs forthcoming for the current troops they are going to need and DESERVE all the help the VA can give them.

If you want any more information or comment, my name is Marilee Lahn.

HOUSE COMMITTEE ON VETERANS AFFAIRS

[redacted]

PRESENTATION BY CHARLES W. KELLEY

PERIPHERAL NEUROPATHY CAUSED BY THE DIOXIN TCDD, OTHER TOXIC CHEMICALS THE VETERANS WERE EXPOSED, OR TO WARTIME SERVICE IN VIETNAM IN A TOXIC CHEMICALS (PLURAL) ENVIRONMENT

STILL DENIED BY THE VA AFTER 40 PLUS YEARS

I am the author of the newly released book "Vietnams Rain Agents Orange, White, and Blue (Weapons of Mass Destruction)." This book documents a four-year review of DOD/VA/Government activity in denying the many effects of our Toxic Chemicals (Plural) Legacy.

Up until our "Vietnam Veterans Toxic Chemicals (Plural) Legacy" it had always been the policy of the Veterans Administration (VA) and "Is currently the portrayed policy of the United States," with respect to individual claims for service connection of diseases and disabilities, that when, after consideration of all the evidence and material of record, there is an approximate balance of positive and negative evidence regarding the merits of an issue material to the determination of a claim, the benefit of the doubt in resolving each such issue shall be given to the claimant.

The VA in promulgating the rules specified by the Dioxin Standards Act of 1984, not only confounded the intent of this perceived intent of Congress, but directly contradicted its own established practice of granting compensable service-connection status for diseases on the lesser showing of "an increased risk of incidence" or "significant correlation" demanding instead the more stringent requirement that compensation depends on establishing a "cause and effect" relationship.

Veterans are now calling this "Dioxin Standards Act" and this so-called "benefit of the doubt mandate" only a "painted and portrayed congressional deception.

In direct opposition to the stated purpose of the Dioxin Standards Act of 1984 to provide disability compensation to Vietnam Veterans suffering who were exposed to Agent Orange, the VA continues to improperly and illegally deny and stall compensation for death and disability. In fact, with the VA's definition of when the Veteran's claim ends, one would logically conclude the VA is now legally allowed to "stall to the death" of the Veterans which is a definite and defined "conflict of interest" between the Veterans and the sole power given to the Secretary of the VA and this very adversarial federal agency.

This VA promulgating of the requirements was also found in a courts review in Nehmer v. U.S. Veterans Admin., 712 F. Supp. 1404, 1408. (N.D. Cal. (1989) wherein the court found after reviewing the legislative history of the Act that Congress intended service connection to be granted on the basis of "increased risk of incidence" or a "significant correlation" between the dioxin TCDD and various diseases."

There are many Veterans, there are many members of Congress, there are many Americans who believe the Department of Defense and the Veterans Administration have been less than candid about the health effects that Agent Orange has had on them as well as on veterans' children. While the Government has acknowledged that some illnesses the Vietnam veterans developed are associated with Agent Orange exposure, and that these veterans can receive disability and death benefits. Many veterans believe that the health problems associated with Agent Orange are far more serious and widespread than the Government has acknowledged up to this point.

The search for latent illnesses associated with exposure to "herbicides" (plural) in our toxic chemical legacy demands persistence, confronting hard truths, and above all integrity. The United States Government has failed miserably with purpose and intent in these issues.

Prior to any studies or evaluation of these toxic chemical damages commencing there is evidence of the government/VA dragging its collective feet with total bias in addressing these issues with any kind of persistence and meeting the hard truths that hard data uncovered in our returning campaigners and meeting behind closed doors with chemical company lead scientists and medical directors.

The head of the VA's Environmental Hazards Group went out into the medical community early on and pronounced that any scientists that found a problem with dioxin was nothing but a Witch Doctor. Thus revealing the VA's total bias against Veterans and their families. We now know who the biased Witch Doctor really was and is and who was behind this bias.

The VA's own committee (VACEH) that held Vietnam Veteran's fate for 13 years operated from 1979 to 1991 was also heavily criticized for bias and lack of integrity. When independent prestigious scientific sources reviewed what this committee was doing and their processes; statements were made that nothing this committee was doing should be used for anything much less medical implications that would result in Veterans Compensations from death and disability.

The NAS/IOM that took over in 1991 seems to be just a continuation of this bias and also less than forthcoming and honest in their assessments with regard to proof of associations that are really required in a court of law versus what the White House/VA wants, which as I found out is totally impossible scientifically and medically.

Twenty three years ago, the Air Force began a 25-year, $140 million research program to assess the relative health of 1,300 ranch hands, air and ground crew members who handled and sprayed Agent Orange and other herbicide defoliants in Vietnam. The Ranch Hand Study was designed to generate significant scientific data and analysis to be used by the Department of Veterans Affairs [VA], and others in making health care and compensation decisions regarding Vietnam Veterans.

Nevertheless, according the General Accounting Office (GAO), Ranch Hand has been slow to publish findings, unwilling to share data, inconsistent in conveying design limitations, and resistant to congressionally mandated participation by "independent parties."

Controversial from the outset, the Ranch Hand study has been consistently criticized for both scientific and administrative shortcomings. Many believe Ranch Hand has so far failed to fulfill its promise as the pivotal longitudinal study of herbicide toxicity. Some

conclude it never will. Others believe this research was designed to fail, or manipulated to avoid controversial findings.

Senator Daschle concluded when the first report was released in 1984 when compared to the original scientific draft that this was not just an interpretation of the medical facts found but the "perpetration of fraudulent government conclusions."

After reviewing the transcripts of the government oversight committee on Ranch Hand and the testimony of scientists themselves that were a lead part of the Ranch Hand, the head of medical research at Kansas State University (a two time member of the Ranch Hand study), and an advisor to the VA Secretary from Yale University; it was painfully obvious this study deserves this well-founded criticism.

There were direct charges of command influence being used, the changing of cleared for publication medical facts that were found, the changing of established protocols directed by using the name of the Surgeon General, linear dioxin dose responses to medical disorders that were not understood were and are not reported found, disorders found at a 50% increase or more are not reported because no dioxin linear dose response could be determined, etc, and an overall total lack of integrity.

Additional charges were made that the study was only crafting for peer review and publication; not actually publishing the found facts.

The ultimate lack of integrity charge was that for 20 plus years the study had and continues such cover-ups to have never given the Veterans a fair and unbiased assessment of their toxic chemical health status in birth defects, other cancers, heart disease, vascular disease, neurological ailments, endocrine disturbances, and hematological difficulties.

I would also add even B and T cell dysregulaton found that may even be the secondary root cause of all of our wide variety of issues of death and disablement is ignored. This includes down and up regulation in Interleukins 4 and 10, Interferon, and some disturbance of the tumor necrosis factor.

Some suggested that the Congress had given entirely too much power to the Secretary of the VA and its White House directed philosophy. I would add that Congress assuming integrity gave too much power, when there is very little government integrity that accompanies that "sole power" in our government.

Some in congress have even suggested that data should be from some outside agency and not from a major role player such as the VA and the Air Force.

I would add that after my four year review of these so called toxic chemical assessments, I would conclude it would have to almost be an international committee of totally independent scientists; not associated with the EPA, VA, FDA, any branch of the DOD, and certainly out of the mandatory influence of our own White House. Very similar to what the EPA did in their dioxin reassessments of 1992-1996 where they used over 100 independent scientists NOT associated with the EPA or any government influence. The EPA's previous history in the 1970's and the 1980's is certainly tainted with some EPA scientists with integrity finding the chemical company studies being presented in court were fraudulent. Their reward for demanding something be done was suspension. One EPA scientist wrote a scathing report shooting holes in the chemical company studies and issues. The EPA

summarily shelved his report in 1979. Yet, it documented many of the findings that would be presented in the EPA's "dioxin reassessment" some two decades later. Another 20 years went by while our most noble of all citizens died or became disabled since their doctors had no idea what to look for and no one in our government gave them a chance at a first medical strike against a cancer or an autoimmune disorder.

One of the most despicable events I ran across in my review of the Ranch Hand Transcripts was when one scientist, not wanting to duplicate his work asked; Would it not be better to wait to review the chapters until the Air Force gets done with all its changes? The leader of this group then stated we do not want to say, "Changed." The scientists then said, "OK how about Airbrushed" as laughter broke out in the room.

Veterans are going uncompensated in death and disability and this group is laughing at the fact the Air Force is going to change what they as scientists have found or suspect.

To include charges were made that totally rewriting some chapters was only to "deemphasize" the real findings.

This White House philosophy made "not to support our Vietnam Veterans" in lieu of protecting and minimizing chemical company costs that would be incurred (*reference White House memo put out to federal agencies) and then deny Vietnam Veterans and their families death and disability benefits seems to be now " a learned and accepted practice" by our government. This seems to permeate research and similar studies for Gulf War Syndrome, anthrax vaccine recipients, the Veterans of Project 112 testing and SHAD testing, and the Edgewood Arsenal testing, etc. There is also the previous history of DOD/VA cover-ups in Nuclear Testing and LSD testing.

*

The White House Bureau of the Budget put out a memo to all the agencies of government in essence not to find a correlation between Agent Orange and health affects. Stating that it would be most unfortunate for two reasons:

A) The cost of supporting the Veterans.
B) The court liability to which corporations would be exposed.

It is time all past; present, and future Veterans make this White House/DOD/VA philosophy a National Security Issue. This especially holds true for the mothers and fathers that this government wants to send their sons and daughters into harms way. They need to realize "the last battle they will fight" is against our own government.

In ATTACHMENT 1, I have provided the various and wide variety of symptoms of this peripheral neuropathy debilitating disorder in nerve damages as well as the wide variety of severity of this toxic chemical caused nerve damage disorder.

In ATTACHMENT 2, I have provided the overwhelming medical and statistical evidence that categorically supports this chronic and debilitating disorder of peripheral neuropathy is associated to the dioxin TCDD and/or Service in Vietnam regardless of which toxic chemical or group of toxic chemicals was the causation. This evidence goes back to 1949, as well as present day epidemiological studies; including Office of Technology Assessment results commissioned by congress itself in 1989.

While the VA wants to contend that only diabetes can create this nerve disorder you will see in ATTACHMENT 2 the p-values found concludes that this is far from only associated to diabetes and with respect to Agent Orange and is the most prolific disorder found as a stand-alone. Medical and study evidence that shows far and above the VA's notorious statement "just as likely as not."

Time permitting I will review these submittals.

Time not permitting I will leave it up to the members to review this direct evidence and move on in the presentation. Most of you are lawyers, so when you review this evidence put yourself in the position of a practicing attorney and in a "real legal system" where evidence means something; not this trumped up Veterans' Board of Veterans Appeals. Decide for yourself if I have proven my case medically, statistically, and scientifically to what congress intended to be compensated for government mistakes. Then multiple that by thousands of disabled Veterans with the same issue that this government is letting down with no financial support for "government wrong-doing and out and out government mistakes."

Also, please review the BVA case file in ATTACHMENT 3 that categorically demonstrates that even when everyone concluded this Marine's nerve disorder was at least a 50/50 chance caused by his toxic chemical exposures. The BVA then states they give more evidentiary weight to the "statements made by the Secretary of the VA" that denies such associations.

ATTACHMENT 4 documents statements made by some of the Edgewood Arsenal testing Veterans. A despicable government act indeed.

So much for the "Mandated Benefit of the Doubt," the "Congressional Mandates," and the "Congressional Dioxin Act of 1984." The VA just in turn, adds legal nomenclature to C.F.R 38 that trumps anything Congress has intended or at least on face value had intended to accomplish for Veterans.

The White House already decided this Marine's case in 1984 with their philosophy "not to support the Veterans." It was not decided in 2003 at the BVA after fighting for eight years to even get that point of an appearance at the BVA. The whole VA legal system is a joke that operates around a mandated budget only. Not truth or evidence of facts as in a real legal system under the constitution. No different than they find a way to trump the entire congress at the behest of White House Budgets, not facts.

For a Federal Agency to be this poor in performance, it has to try real hard to be just that. Not only poor in performance but integrity as well. Make no mistake; this is a very adversarial agency that works at the behest of the White House, not the Veterans.

As a side note, I have to smirk at all the present political wrangling going on with the Supreme Court Justices. For Veterans of this nation it is irrelevant who is on the Supreme Court or even the constitutional legal system that guarantees protection for the rest of the Nation's Citizens against government corruption and collaborations. With the power congress has given to the Secretary of the VA and to each successive White House; for the Veterans and their widows the Secretary of the VA becomes not only the executive and legislative branch of government but also their Supreme Court, as all their real legal rights "as citizens" are laid aside.

Without question, the Feres Doctrine has denied American service members, veterans, and their families "equal justice" under The United States Constitution.

Many federal judges, scholars, lawyers, doctors, veterans and their families argue that the Feres Doctrine is unconstitutional since it violates the "due process, equal protection and separation of powers" clauses of the Constitution. The most significant dissenter in modern times is sitting Supreme Court Justice Scalia as cited in the case of United States v. Johnson, (1987):

> **"Feres was wrongly decided and heartily deserves the widespread, almost universal criticism it has received." Furthermore, "Congress's inaction regarding this doctrine and its doing little, if anything in the way of modifying it to prevent Constitutional claims is clearly unjust and irrational. Again, allowing such power to military leaders can and does result in abuse therefore, where are the checks and balances on the military."**

Yet, still to this day Congress will not address this issue of the DOD is presently allowed to do anything it wants with no accountability, including what many consider crimes against humanity itself, which this very country hanged individuals for after WW2. Thus leaving the Veterans with no legal redress as guaranteed by the constitution that they alone so valiantly and honorably fought to protect.

Add to this the omnipotent sole power and a "totally separate legal system" with no rules of any constitutional oversight given to VA by Congress in C.F.R 38, paragraph 510 and you have total government anarchy for one complete segment of society in this nation called "Veterans."

The pledge that congress repeats daily is: I pledge allegiance...with liberty and JUSTICE FOR ALL. This pledge does not have an extra note that says "ALL" is not inclusive for those citizens that once wore the uniform of the United States Military.

The evidence I have submitted to you in ATTACHMENTS 1 AND 2 are strictly on this one disorder of nerve damages but there are many disorders that have an equal amount of medical evidence that I can address should you choose to hear the truth. You just have to give me time to address each issue, as I am physically able to do so.

When President Clinton approved this nerve disorder as being associated the nomenclature used was; "ACUTE NEUROPATHY."

The DVA/White House to control the Veterans' compensation expenditures put a time limit on this prolific nerve disorder with a time limit of resolution and/or cure of this nerve disorder.

The first proposal was for a 10-year time limit and a two-year resolution. Many scientists and doctors protested even this VA action to Secretary Derwinski. What it ended up was a one-year time limit and a two-year resolution announced in 1996. Which makes about as much sense as concluding the following: "That within 678 and one-half days the Veteran must manifest in order to draw disability compensations."

It does not take a mathematical genius to crunch the numbers and calculate that even when this nerve disorder was announced, "As Associated," no Veteran at that time could qualify or would ever qualify. Nice propaganda move on the part of the VA, its' Secretary, and the White House.

The VA then classified this nerve disorder; "TRANSIENT ACUTE AND SUB ACUTE PERIPHERAL NEUROPATHY," which no Vietnam Veteran has submitted for compensations.

In the VA propaganda magazine "Agent Orange in Review" which should be "Dioxin TCDD in Review" since no (zero) "U.S. Government Study" has done any studies on the HERBICIDE Agent Orange, the issue was falsely printed as Peripheral Neuropathy. Only after protests by Veterans, such as myself, that this was a VA mischaracterization to the public did they finally change the listing to some form of truth.

Including complaints from Veterans, such as myself, of Veterans' Magazines reprinting the bogus VA claims. In which, editors printed retractions after realizing the truth.

By associating this medical disorder and two other disorders to a time limit, the VA has distanced themselves from the real causes of the three time limit disorders.

In fact, by determining a time limit and pronouncing that a cure is available or at least the nerve damage will resolve itself over time; the DVA and the National Academy of Science Institute of Medicine (NAS/IOM), the hired guns of the government replacing the despicable Veterans Affairs Chemical and Environmental Hazards Committee that operated from 1979 to 1991, certainly must have concluded the following:**

- **The concluding morphology of how the dioxin TCDD directly creates this transient acute and sub acute peripheral neuropathy outside of an antigenic response since scientists categorically state that the single dioxin (TCDD) does not create a body antigenic response such as spider bite or even some poisonous plants that are ingested.**

Therefore, one must conclude that the VA and the NAS/IOM have discovered this morphology and have kept this medical secret to themselves.

- **The VA and the NAS/IOM certainly have concluded not only the morphology, since the time limit of manifestation is now mandated. They certainly must have established either the minimum "total body threshold" regardless of means of ingestion or at least the minimum "dose rate" by specific methods of ingestion that equates to a mandated manifestation within one year of exposure to the dioxin TCDD.**

- **The VA and the NAS/IOM have some how determined that every Veteran serving in theater during his or her 12 –18 months wartime service shall have achieved this magic "minimum exposure" required to the dioxin TCDD to manifest within the year after leaving the wartime theater. This would also include those that were wounded within three months of entering the war and left theater.**

Yes, all of this is government/VA medical nonsense.

The VA and NAS/IOM have concluded a cure or resolution for this nerve disorder does exist. Yet, in seeing three board certified neurologists one of whom was the head of neurology at Emory University indicates this nerve damage is chronic, debilitating, and not curable. It is self-manifesting from the secondary effects of the toxic chemicals. Not an antigenic response and more in the form of an autoimmune disorder, which is one of the cruelest of all diseases and disorders.

Some have suggested that to have this nerve disorder this badly it had to be caused by either heavy metals or toxic chemicals and not a diabetic connection. Once again it seems the VA and the NAS/IOM know how to cure this nerve disorder when the rest of the nations board certified doctors seemed to be nothing but board certified quacks.

The Congress has gone along with this DOD/VA collaboration that everything is associated to one single toxic chemical component (the dioxin TCDD) of three major Herbicides used; which is shear and total nonsense.

We know that Agent Blue was a form of arsenic acid that is noted for its neurotoxicity properties including warnings of creating nerve damage such as peripheral neuropathy as well as many issues that overlap what the VA is saying is only the dioxin TCDD causations.

We now know that Agent White with its DOW chemical proprietary formula had other forms of dioxins, and closely related furans, as well as nitrosamines.

We now know that Agent White contained Hexachlorobenzene, a noted liver damage toxic chemical.

> **"Nitrosamines are another type of carcinogenic chemicals that are known to cause cancers and other medical problems.**
>
> **Exposure to high concentrations of nitrosamines is associated with increased mortality from cancers of the esophagus, oral cavity, and pharynx. When used in pesticides or herbicides it may cause DNA damage and cell death."**

Congress must realize the synergy effect of all these toxic chemicals used in one area can increase the potency and generated outcomes by a factor of 1600 times when using only two toxic chemicals over what a single toxic chemical can produce.

The bottom line for Vietnam Veterans is that no one will ever know what caused what to some level of "cause and effect" that the DOD, the VA, and our White House is demanding to a SINGLE TOXIC CHEMICAL ELEMENT for death and disability compensations.

ATTACHMENT 2 documents just how ridiculous this stand by the VA really is with respect to actual science, medical facts, statistics, and above all common sense with regard to this most prolific Vietnam Veterans nerve disorder. With wide ranging symptoms from constant discomfort and much pain to mimicking a muscular dystrophy issue with wasting and weakness of the limbs requiring a wheel chair or leg braces.

> ****(NAS/IOM is the government-contracted agency that associates Veterans Medical Issues in assisting DOD cover-ups and mistakes. The same government contracted agency that for 10 years led the finger pointing that stress in a 100-hour war where**

the enemy was retreating and being slaughtered caused all the death, disability, and birth defects in our returning Gulf War Veterans.) Veterans now know better after 10's of thousands became disabled and/or died and other INDEPENDENT studies show stress had nothing to do with this death and disablement.

Many Veterans that have dealt with the NAS/IOM and their total bias are now concluding they work at the behest of the White House/DVA connection only. Given requests to IOM to define the "evidences" of presumptive service and service connection, but in no way does anyone specify what that is or what level of proof is required; at least that anyone will admit.

Because NAS/IOM is a separate and private entity from the VA then the IOM is wholly subject and liable to both political and legal methods.

Many are suggesting Veterans and their families take NAS/IOM (and specific individuals within the NAS/IOM) to task under tort claims and malpractice, discrimination, and bias inside the Veteran's arena. (Very similar to those individuals within the top levels of the VA that the Vietnam Veterans of America are now taking to court for their willful and wanton cover-ups of SHAD testing.) Since they signed the papers and documents, they must now defend their convictions regardless of who in the DOD/VA directed such nefarious actions against Veterans for the sake of the DOD and/or politics and money.

One of the jobs of our congress as our elected government officials is to make sure that no government collaboration or conspiratorial actions can or will take place against any single segment of society. It should not matter that we once wore the uniform of the United States Military.

When you created the Veteran, you do not lay aside the citizen.

Is this then their reward for serving an ungrateful Congress and President(s) who would rather protect chemical companies than support those who defended the constitution and then have no rights to its very protection.

One of the definitions of "honorable" is, "characterized by integrity: guided by a high sense of honor and duty." While that certainly fits the men this nation sent to do battle for 10 years. In our toxic chemicals (plural) legacy our own government has not been forthcoming nor honorable.

I will close with a statement by Congressman Shays from the 2000 Government Oversight Review of the Ranch Hand Study:

"At what level do you think Government should consider compensation? Should we have a no shadow of a doubt? The reason why I am asking the question is I have concluded, based on our work that we have done on Gulf War illnesses, based on our review of Agent Orange, that I have to be honest with our veterans. By the time we will know the scientific data, you are dead. You will either have died early or you will have died in your old age in pain, but you will not get help from the Federal Government."

What the congressman left out was; this is all White House/DOD/VA purposefully calculated and planned.

Charles Kelley
DMZ Veteran 67-68
[redacted]

[redacted]

From: Catling Michael A GS-12 46 MOS/MXOPT [redacted]
Sent: Tuesday, October 25, 2005 9:36 AM
To: [redacted]
Cc: [redacted]
Subject: Gulf War Veteran Testimony

Dear 1991 Gulf War Veterans

There will be a hearing on Nov 15, 2005 that will make or break us as a group. Congress has asked what the status of Gulf War related research, compensation and treatment is in the VA. There are several issues we will bring to the congress that are unresolved or completely broken.

Treatment
Current Science
Healthcare
Funding
Compensation
Education of VA Docs
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My response to your above request for Testimony!

Hello Ms. Florenino, Ms. McElroy, and Mr. Robinson

I am a 1991 Gulf War Veteran who was deployed to Saudi Arabia, January 1991. I was diagnosed with Primary Progressive Multiple Scirosis in 1999. Due to the time between being discharged from the Active Air Force and when I was officially diagnosed being over 7 years the VA is denying all my claims for Compensation. I once was a long distance runner in the past, having once completed a marathon in under 3 hours and 30 minutes. I now struggle to walk more than 30 feet becoming exhausted and at times tripping and falling down. I now stagger everyday through our home, going to and coming from work. It is visibly evident that I am handicapped. Playing with my children was once a frequent event but now they avoid me not wanting to possibly hurt or cause me to fall. My knees show bruises everyday from my trips and falls.
The MS has been a devastating event for me and my family. I am a married man with 3 children.
When I say devastating I must explain that everyday living has become a monumental hurdle for me to overcome. I am currently employed Civil Service but question myself everyday on how long can I maintain any level of productive work.
Recently, April 2005, I was forced to give up a highly sought after Civil Service assignment at an overseas location because my physical handicap, due to the MS, negatively impacted my ability to complete the physical demands of the job thus becoming a burden on my unit's ability to complete their assigned mission.
Being a man of high morals and integrity I did not fight the decision to have me removed from the position and transferred back to a stateside assignment where my physical impairment might not affect the day to day mission requirements. Having to leave my overseas assignment early, I was on a 3 year tour and had only completed 20 months, also hurt my wife and my children directly. My family was also with me at my overseas assignment. My wife was also Civil Service at the time and was forced to give up her job when we returned stateside. My children, all school age, were forced to interrupt their school year, leaving 2 weeks before it ended, and still to this day say they wish it could have been different.
I wish and pray everyday for it to be different. I did not ask to be handicapped. I volunteered to serve my

country in the name of Freedom. If possible I would be the first to volunteer again. I feel bad and am forced to endure constant pain and stresses everyday knowing I cannot ignore my handicap. It has greatly hurt my family. My kids are scarred for life knowing their Dad cannot be there for them all the time. Going to the park with them is now not part of my daily life. I ask my wife to go with them while I wait at home. I miss being able to do things with my family. It is not fair for those of us GWV who volunteered to put their lives at risk and now must endure their pains in silence getting no help or assistance from the VA.

I also ended my Air Force Reserve military Career early not being able to physically maintain the required standards. I ended up accepting an early retirement as a Captain as an IMA in 2004. I once had aspirations to stay in the service long enough to attain the rank of Colonel. I would have easily attained this rank is I was not struggling everyday with my illness.

My loving wife and family can see my daily struggle. I thank God my wife has the patience and the love to help me while I struggle to exist.

It hurts everyday to see them, my family, struggle. Lastly I must state my illness has been a constant financial burden on my family. With the VA denying all my claims for compensation we are forced to pay for all of my medical bills from my income.

Again, this is not fair for any of us Veterans.